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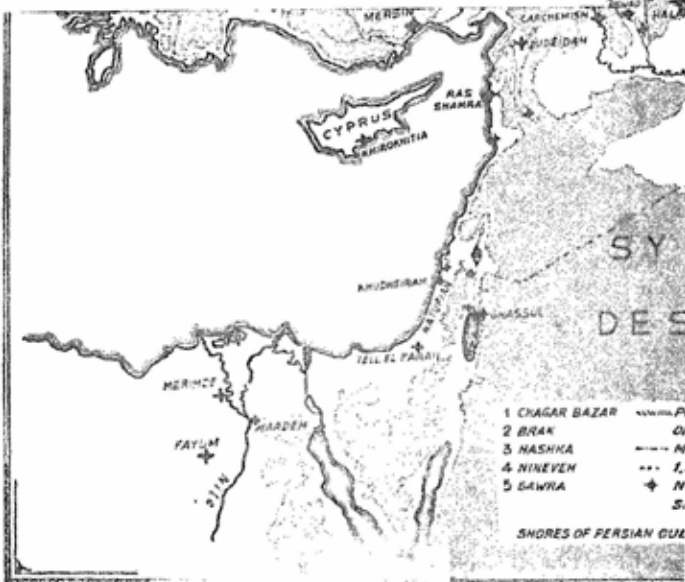
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THE STORY OF PREHISTORIC
CIVILIZATIONS



THE EARLIEST KNOWN FARMER AND HIS
POSSESSIONS, 5000 B.C.?

a, flint axe or hoe; b, farmer; c, knife handles of carved bone; d, sling stone; e, stone bracelet and beads; f, copper pins and wire ornament; g, mortar and pestle for face paint; h, alabaster ring; i, spindle whorl; j, mortar; k, saddle quern (Period II); l, a farmer's skull, extremely long and narrow.

Frontispiece

THE
STORY OF PREHISTORIC
CIVILIZATIONS

DOROTHY DAVISON

AUTHOR OF "MEN OF THE DAWN" AND
"DAYS AND WAYS OF EARLY MAN"

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Preface

THIS little book is designed to fill a gap in the recent literature relating to Neolithic Man. There are the large and detailed books of Childe, Hawkes, and Clarke, and soon there will be others by Hawkes, Piggott, and Daniels. There are also two fine Pelican books: Gordon Childe's *What Happened in History* (a little masterpiece, giving a brilliant account of all stages of prehistory) and J. and C. Hawkes's delightful story of *Prehistoric Britain*. These, with Childe's *Man Makes Himself*, present in a most readable form theories and background material which, therefore, have been omitted from this book.

The following books are invaluable, and are so constantly needed by the student who wishes to follow the subject further that they are not included in the bibliography: *The Prehistoric Foundations of Europe*, by C. F. C. Hawkes; *The Dawn of European Civilization*, by V. Gordon Childe; *The Races of Europe*, by C. S. Coon; *Reallexikon der Vorgeschichte*, edited by Max Ebert; and the archaeological reports in the *American Journal of Archaeology and Anthropology*. *Reallexikon* is a splendid picture-gallery of prehistory and is worth going a long way to see.

If only one journal can be taken, *Antiquity* is the most useful and ought to be in all libraries. *The Proceedings of the Prehistoric Society* are excellent and give detailed reports of excavations, but usually deal with British prehistory. *The Antiquaries' Journal* frequently has articles on this subject, and it also publishes a section on periodical literature and bibliography which is invaluable.

It is hoped that the numerous illustrations and the general survey attempted here will serve as an introduction and illustrated guide to specialized literature and as a more detailed framework to the smaller books.

It is most desirable that the reader's imagination shall transform the small drawings into treasured household crockery, craftsmen's tools, and hunter's weapons. May the same imagination vitalize the summaries of cultures until they

become the life and thought of real men and women, who often lived monotonously, sometimes adventurously, but always precariously. May tiny plans be transformed into huts and houses, dirty and stuffy, but nevertheless homes; and may plans of tombs take the form and substance of mighty, awe-inspiring abodes of the powerful dead. See the shapeless chalk pendant hanging around the neck of a dark-haired girl, or the stone button fastening the garment of a chieftain with a golden fillet on his head. Watch the miner pick up the shoulder-blade of an ox and shovel the chalk lumps out of the low, dark gallery of a flint mine. Remember that pottery took the place of boxes and cupboards; food and drink, necklaces, and flint knives were kept in pots. Large vessels were usually for storage, and the smaller ones for eating and drinking.

Some of the energy and skill devoted to the solution of cross-word puzzles might find an interesting outlet in plotting styles of pottery, implements, and figurines on skeleton maps with a view to the building up of new theories, the tracing of migrations of peoples, or the discovering of the influences which created new cultures. The comparisons and suggestions offered in the text by no means exhaust the possibilities dormant in the illustrations.

The overcrowding of the illustrations and the disregard of comparative size have been allowed most reluctantly, because it seemed necessary to draw the greatest possible number of articles in view of the dearth of illustrations in archaeological books and the extreme difficulty of gaining access to the journals which give original accounts of excavations.

Will the authors whose illustrations I have copied (and occasionally taken slight liberties with) please accept my thanks? Readers who need an exact record of an object are advised to consult the original sources.

I am very grateful to Prof. Fleure, Prof. Gordon Childe, Prof. Hawkes, and Dr. M. Davies for help in obtaining books and information, and to the Rev. J. F. Shepherd, M.A., and Mr. W. Brice, M.A., for help with the manuscript.

DOROTHY DAVISON.

Didsbury, 1950.

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Part I—The Near East

CHAPTER I

THE PRELUDE TO FARMING

As the years pass by, the story of man's evolution grows increasingly wonderful and surprising. Early archaeologists would be astonished at the complexity and richness of our knowledge today. They thought the subject was neatly taped when they divided it into clear-cut ages—the Palæolithic or Old Stone Age, the Neolithic or New Stone Age, the Chalcolithic or Copper Age, and the Bronze and Iron Ages. These terms have too firm a grip to be discarded, but they are not always descriptive. "Age" is a misleading term. "Culture" would be better. Sometimes even neighbouring peoples belonged to quite different "Ages." For instance, soon after 2000 B.C. Mesolithic hunters, Neolithic farmers, and Bronze Age warrior herdsmen all lived in Britain at the same time.

Nevertheless, it is true that for by far the greater part of human prehistory the only culture known was Palæolithic. It reached its climax towards the end of the Ice Age in the magnificent art of the cave-dwellers of Spain and France and that of the mammoth-hunters of Prédmost (Bohemia) and the Russian steppes.

These people were dependent for most of their food and all their clothing on the vast herds of game that roamed over the endless, grassy plains. When, following the retreat of the ice, wet weather fostered the growth of forests, the animals migrated north, and men had either to follow them, perish, or adapt themselves to a totally new kind of life. Many did adapt themselves, and the cultures they evolved are known as the Mesolithic. This change probably commenced about 10000 B.C.

Gone was the hunters' paradise of the spacious steppes, and over most of the land dense forests or impenetrable marshes made life exceedingly difficult for men. Along river-banks, in open sandy or gravelly patches, near lakes or on moors, they hunted and fished. Those living by the sea existed chiefly on shell-fish, throwing the shells aside until huge mounds or middens were formed; and among these the people spent their lives and buried their dead. Some northern peoples cleverly devised a number of excellent tools of stone and bone, and they inherited some of the fine Palæolithic traditions of art. Their story can be read in Prof. J. G. D. Clarke's *The Mesolithic Age in Northern Europe*. The cultures of most Mesolithic folk, however, were of a low standard, and cannot be compared with those of the later Palæolithic Age.

All these people were entirely dependent on nature for food and clothes; but at some unknown time and place in the Near East men (or probably women) at last broke their thralldom and began to make nature their servant by planting seeds of the wild grasses which they had long gathered for food. This unnoticed revolution occurred when the climate of North Africa and the Near East was becoming drier, though the rainfall was still decidedly greater than it is now. The rain-belts moved north with the retreat of the ice, and the once continuous belt of prairies was reverting to desert, dotted by numerous oases and intersected by fertile valleys. So men and animals came together as never before, with the result that the hunters turned their attention to taming the most useful animals—cows, goats, sheep and pigs. Gradually their con-

trol became so complete that cows and goats allowed themselves to be milked. Then, as Childe aptly remarks, the people had "living larders and walking wardrobes" always at hand.

Whether stock-breeding preceded or followed the discovery of agriculture, or whether tillers of the soil first domesticated animals, is unknown, for the earliest Neolithic folk were mixed farmers, practising garden cultivation and keeping some, if not all, of the domesticated animals referred to.¹

When men had gained even a partial control over their food supply a new era dawned in which they rapidly added to their possessions, opportunities, and comfort. Populations increased also with the help of milk for babies and the sick, and with security from famine. Gradually settled conditions and a surplus of food for barter allowed the specialization of craftsmen and others, and laid the foundation of town economy. Early social life seems to have been simple and democratic, with equal treatment for men and women; but the increase of possessions, and greed for still more, led to the rise of a dominant ruling class, war, conquest, and slavery.

As the change from food-gathering to food-producing made such a vast difference to men's lives, surely one of the most interesting problems archaeologists have to solve is the discovery of the people who first planted seed and domesticated animals. So far the earliest Neolithic sites reveal men with a long, primitive farming tradition behind them. There is just one race known which may provide a link between the food-gatherers and the food-producers. In Palestine a people called the Natufians, while using Mesolithic types of implements, made sickles of small, teeth-like flints mounted on the rib-bones of animals, and these show a curious lustre such as is caused by cutting straw. They also used mortars and rubbers for grinding corn, but, as there is no other sign of farming, it is possible that they reaped and ground the wheat and barley which then grew wild in Palestine. Their one domestic

¹ See Childe's popular books for a full discussion of Neolithic economy and its significance.

animal was the dog, which was tamed also by European Mesolithic folk.

The Natufians had not discovered how to make pottery, but they shaped basalt and limestone vessels, and most skilfully carved the bone handles of their implements. The appealing head of a young deer (Fig. 1, *a*) reminds one of the lovely young



FIG. 1—NATUFIAN CRAFTSMANSHIP

a, b, animal carving in bone; *c*, human head in stone; *e*, beads; *f*, fragment of wooden sickle with flint blade; *g*, bone harpoon; *h, i*, flint implement, pigmy flints and arrows.

boar's head from Palæolithic Vistonice. Each has the essence of youthful charm, and though a magical value may have been attached to them, yet surely the carvers enjoyed their work. The human head from the same stratum is as crude as the animal figures are beautiful (Fig. 1, *c*).

The Natufians, who lived at the foot of Mount Carmel on a terrace outside the Cave of Mugharet-el-Wad, took a good deal of trouble to express ideas which we cannot understand.

With flint tools they cut a platform in the limestone and surrounded it with a wall of squared blocks, while just beyond they carefully hollowed out conical cup-holes and basins in the rock. Near by a number of people were buried, as though this area were a sacred enclosure.

Perhaps there were leaders or chiefs among these people, for some of the skeletons wore attractive head-dresses of pencil-like, dentilian shells carefully graded for size and strung together (chapter heading). Similar shells were used as spacers between tooth-shaped bone pendants. This form recurs very much later in several widely separated districts in Europe. Probably two races of Mediterranean type, one following the other, both practised varieties of Natufian culture.

The date of the earliest Natufians is unknown. Some authorities place it even before 6000 B.C. It is now realized that the whole period was very long, and it has been divided into four stages, the last of which may have persisted in remote places into the Chalcolithic Age. As so frequently happened, the earlier stages showed the best workmanship.

A new and unexpected light may be thrown on the emergence of Neolithic life by a recent excavation at Khartoum (Sudan) which has revealed an early settlement of massive negroid people who lived a simple hunter's life on a sandhill by the Nile. They made Neolithic stone tools and fine barbed spear-heads of bone, wore ostrich-shell disc beads and a few pendants, and painted themselves lavishly with red and yellow ochre. So far no sign of farming has been found, and the numerous stone rubbers unearthed are stained with ochre, and do not seem to have been used for grinding corn.

The surprising feature of this discovery lies in the fact that these primitive people made pottery, and even decorated it by drawing a comb (actually the spine of a catfish) over the wet clay in wavy lines until the whole pot was covered with an attractive undulating pattern. They also stabbed the clay, making pitted designs, and impressed it with cord to imitate basketry (Fig. 2, 3, 4). If, as the excavator thinks, this culture dates from before 4000 B.C., it may alter some of our concep-

tions of the growth of Neolithic culture. Hitherto it has been supposed that the settled life of farming encouraged women to make such things as breakable pots, which would have been useless to nomads, yet here food-gatherers had them. The question is whether they lived in a backwater and learnt the art from people with a full Neolithic culture, or whether

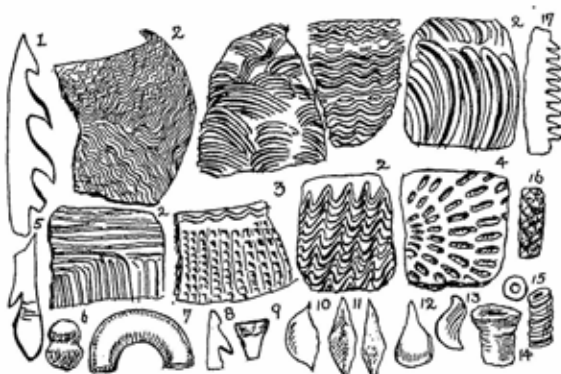


FIG. 2—OBJECTS FROM EARLY KHARTOUM

1, 5, bone spearheads; 2, wavy-line pottery; 3, catfish spine decoration on potsherds; 4, impressions of twine; 6, waisted pebble; 7, stone ring; 8, bone arrow-head; 9, flint arrow-head; 10, scraper; 11, points; 12, borer; 13, quartz fish-hook (?); 14, clay object with cupped ends; 15, ostrich shell bead; 16, bone pin; 17, catfish spine.

pottery-making was known to North African tribes before agriculture, and from them diffused to the early farmers of the Near East. At present the latter surmise hardly seems likely; but an excavation such as this keeps us on tiptoe, and reminds us that unexpected evidence may yet come from an unexpected quarter.

From various isolated finds it appears likely that a culture allied to that of Khartoum was common to negroid people from

the Nile to the Niger about the latitude of Khartoum. To the east wavy-lined pottery has been found on the route to the Red Sea; but it seems unlikely that it was introduced from that direction, for in no way does it resemble the pottery of the Near East. The much finer, more delicate, and possibly later ware of Badari (Upper Egypt) alone bears some resemblance in its rippled surface.



CHAPTER II

THE FIRST FARMERS

ALTHOUGH the origin of agriculture and stock-breeding is still unknown, it is almost certain that it can be traced to the Near East. The knowledge spread thence to Europe and to the East as backward races learnt from their more advanced neighbours, or it was carried by colonists, who in wave after wave migrated from the ancient centres of civilization.

The people who first realized that they might supplement nature's provision by sowing and reaping must have been accustomed to eating wild barley and wheat (emmer and dinkel). Such grasses now grow in South-East Asia, and it is assumed, therefore, that agriculture was first practised there—probably in the northern sector of that vast semicircle of land which fringes the great deserts from Palestine to the Persian Gulf and is known as "The Fertile Crescent." In the north are the foothills of the Kurdistan mountains, down which rush turbulent rivers in springtime. These flood the land and leave a covering of a rich fertile silt excellent for crops. The trouble is that the floods come just before the hot season, and so the land is parched too soon for seeds to root. Similar conditions prevail in Iran, where cereals also grow wild. The question is whether in the wetter climate of Neolithic days crops could be grown more easily, for it is hardly likely that the first farmer irrigated his little plot.

The Nile Valley provides man with a yearly object-lesson in

simple agriculture. There the vast floods come for a few weeks only at the end of the hot season, and the shoots of corn, which sprout a few days after the recession of the water, grow in the moist ground during the cold season and ripen at the beginning of the hot season before the soil becomes too parched to sustain them. Nowhere else does nature manage things so well. Barley is native to Egypt, and was cultivated by the earliest known tribes of the Nile Valley. Wheat does not grow wild there now, but may have done when there was more rain.

Other areas where agriculture may have been first practised are the high plateaux among the Kurdistan mountains. There tracts of country stand out brilliantly green against a drab landscape, because perennial springs water the land. Among the luxurious vegetation grow wild cereals, and near by are many mounds (still unexcavated) containing Neolithic potsherds. There, too, spring floods might suggest simple irrigation to men. The neighbouring mountains provided timber and cool summer pasture.

As communities grew larger and the climate became drier, men often had to irrigate their lands to obtain sufficient crops, and this proved a blessing in disguise, for it enforced co-operation and strengthened whatever social organization there was.

It is tantalizing to find that wherever excavation has revealed early Neolithic villages they are at nearly the same stage of culture, and, moreover, it is impossible to say which is the oldest. All had progressed beyond the experimental stage, though they varied very considerably. All Neolithic arts and crafts were known in most villages and some in every village. Often it is possible to trace through level after level, age after age, the experiments and growth of knowledge and skill in such crafts as pottery, stone-grinding and polishing, bead-making, painting and weaving.

An account of these first centres of civilization, which held such promise for the future, is apt to seem rather dull and monotonous, partly because so much has perished in 7,000 or

so years, and partly because simple cultures naturally had a great deal in common. Yet in order to enter even slightly into the life of our ancestors and to grasp the significance of further discoveries it is essential to know what excavation has revealed on each site. An insignificant pattern on pottery may tell of contacts between villagers living hundreds of miles apart. The route by which our ancestors reached Britain was discovered by plotting on a map the sites where certain kinds of pottery and implements were found.

Just as a historian treasures every fragment of early manuscript or papyrus, so a prehistorian treasures the smallest potsherd, stone tool, or scrap of copper, for these must take the place of words and pictures in deciphering the earliest part of man's story. Sometimes the absence of expected objects is as interesting as actual finds.

As it is difficult to obtain the reports and pictures of many excavations, short accounts of the most important will be given in this and the following chapters, but, owing to restriction of space, the reader is left to make many comparisons and to puzzle out their possible meaning. Questions and problems should be kept in mind as clearly as facts, for only so can the thrill and adventure of entering into the exciting discoveries of the future become ours.

Archæologists who search for Neolithic man in the Near East seek for large artificial mounds or tells, and then excavate pits or trenches down to their base, most carefully recording the exact position of every object found. These mounds are entirely composed of ruined villages and towns, one on the top of the other, and, as most prehistoric buildings were made of mud, they were destroyed gradually by the weather or quickly by the invader or by fire. There was plenty of demolition in those days, but no clearance of debris. That was merely levelled and used as a foundation for the next building: so each settlement rose above the last, and when some mounds were abandoned in early historical times they had risen forty to one hundred feet above the surrounding plain, and contained as many as forty-four layers of villages. Such mounds

are scattered in thousands over the Near East, and very few of these have been even partially excavated. In their vast accumulation they probably hold the answers to the innumerable questions that puzzle archaeologists today.

The layers or strata are often called "levels." Archaeologists usually reckon from the bottom upwards, calling the earliest Level I, but some add to the difficulties of the subject by reckoning from the top and calling the latest Level I. In this book the oldest level is always described first, whatever the number.

*Stalk I.*¹—In North-West Iran is the mound of Sialk, near Kashan, south-east of Teheran (see map, front end-paper). It has given a wonderfully clear picture of some of the earliest Neolithic peoples known. This seems a most unlikely district in which to find early farmers, with its terrible gaunt mountains, stony plateaux, sand dunes, and shrinking lake. Yet 7,000 or so years ago it must have seemed like fairyland, for then the lake was much larger, its marshy, reed-lined shores alive with wild fowl, and at sunset nearly all the animals a hunter dreams of came down to its waters to drink. Bordering it was fertile country watered by a great stream that tumbled through a deeply-cut cleft in the mountains and formed a delta where it entered the lake. On this strip of rich soil the first settlers built their mud-plastered reed huts, and their descendants remained there for 4,000 or 5,000 years. They never had need to seek fresh land, because each year the flood-waters renewed the soil of their garden plots.

It has always been assumed that broad-headed folk, like the Armenians, were indigenous to Iran, but excavators found only long-headed peoples. They were of two types: one the small, slender, proto-Mediterranean race, and the other a bigger, taller people with extremely long, narrow faces, rough-cut features, and large, projecting noses (*Frontispiece, I*). These two races apparently lived a peaceful life together, hunting frequently with slings and stone-headed maces or clubs. They

¹ Plain polished red ware only is said to have been found recently below Level I.



FIG. 3—POTTERY FROM SIALK I

b, "fruit stands"; c, badly baked mottled ware; d, coarse cooking ware; e, rough black on red; f, mace heads; g, copper awls (Period II); a, h, pottery patterns.

had already learnt to domesticate sheep and oxen, to weave and make pottery, and so were far beyond the beginnings of Neolithic life. They made a good variety of chipped stone implements—knives, scrapers, axes, hoes, and sickle blades. Clay spindle whorls prove that they could spin and weave some kind of cloth. They also interlaced branches to form wattle-work walls for their huts. We know this because fragments of the dried mud with which they plastered such walls are still lying on the hut floors and show clearly the impression of the branches. No doubt the tall reeds of the lake-side were woven into mats and baskets. Many primitive people have woven reeds and branches, but it took a genius to discover how to spin a thread from wool or hair or fibre for weaving into cloth.

How great such an invention was we can hardly appreciate today, and the same is true of pottery-making, which seems to be almost a natural activity of mankind; yet for untold ages people carried liquids and food in skins, gourds, and clay-lined baskets before some clever woman thought of moulding and drying clay and later of baking it to turn it into stone. It has been suggested that after her home had been destroyed by a fire a woman noticed that the broken clay walls were hard, and so thought it would be a good idea to put her sun-dried clay vessels, which broke so easily, in the fire. Perhaps more probable is the suggestion that a woman forgot her clay-plastered basket full of water which she had placed on glowing embers, and received a shock when she found only the clay shell, the basket being burnt away. Such things really did happen, for in East Africa a piece of baked clay bearing the impress of a basket has been found! But even after the marvel of baking pots was discovered there was much to learn before fine, smooth, hard ware could be produced at will.

Few people realize how difficult it is to make a pot that will not crack or crumble, or think of the foresight needed to allow for the changes of colour due to the mixture of the paste and the colouring ingredients used, plus the method of firing. All early peoples tried to obtain a smooth, highly polished

surface, and that was not an easy task. Some smoothed it well before firing; others burnished it afterwards with a pebble; and some genius thought of applying a specially fine clay paste called "slip," which baked hard and smooth.

In layer after layer in the mound of Sialk it is possible to trace the experiments of generation after generation of women as they gained skill through experience and tradition. At first their pots were coarse and fragile because the clay was not well chosen or mixed or washed, but soon they learnt to mix chopped vegetable matter with it to prevent it from cracking. Their ware is full of tiny holes left by bits of burnt vegetable debris. The firing was imperfect and haphazard, for the pots were simply placed on an open fire and burning wood piled over and around them, so that there was no control of the heat. Consequently the pots were often unevenly baked and had a mottled surface, red where the heat was most intense and grey where it was less so (Fig. 3, c). The potters experimented in various ways to obtain a smooth, shiny surface, and one can still see the marks left by the pressure of Sialk women's hands or the wet rag or skin they used to smooth the clay before baking.

The most remarkable achievement of these early people was the discovery that they could decorate their pots with paint which, after firing, gave most pleasing results. As she applied her paint, the artist had to visualize the result of the change of colours due to baking. An easier and more obvious method of decoration was employed by Western Neolithic women, who made marks on the damp clay with anything handy—fingernail, piece of shell, stick, or bone. Generally the patterns used by early potters imitated those on their leather or basket receptacles. Opinion is divided as to whether the Sialk patterns are reminiscent of basketry or not.

Both buff and red pottery were found in the lowest layer of Sialk, and this may indicate the presence of two tribes living together peacefully, for later the two kinds of pottery undoubtedly belonged to two provinces or peoples.

Besides the necessary handleless cups, bowls, or goblets, the

women made little pestles and mortars of pottery for grinding the colour with which they adorned themselves (*Frontispiece, g*). Some of the red paint still adheres to the mortars after 7,000 years. These folk had not as much "jewellery" as many of the Old Stone Age people. At first their necklaces were of pottery beads and shells, but later they were able to cut rings and bracelets of stone and to shape and bore stone beads (*Frontispiece, e*).

From this hamlet only a very commonplace collection of articles has been recovered, with one notable exception. This is a delightful figure of a man carved out of a bone and used as the handle of a flint knife, which was fastened into it with bitumen. Very dignified this farmer of 7,000 years ago looks in his peaked cap, his kilt with a folded belt of cloth or soft hide, and with his hand raised in the attitude of oriental salutation (*Frontispiece, b*). This was no wild savage, nor was the man who so skilfully carved him with flint tools. Unfortunately the face is broken, but the marvel is that so much remains intact. Such carvings are unknown in nearer Asia, and the closest analogies are the carvings of the Natufians and the Badarians.

So these early farmer-hunters lived in their self-contained villages content with life as it was, experimenting little and learning little from the outside world. When they died they were buried under their hut floors, usually without food or implements—perhaps they were supposed still to partake of the family meals, as they were smothered in life-giving red ochre to revivify them. Babies were buried in pots, a custom which spread widely and lasted until historical times.

Progress in early times was extremely slow, and half a dozen generations later this site showed little change, except that the huts were made of pisé (lumps of beaten clay) and the floors of beaten clay. Stone-working had progressed so far that cups, jars, and maces could be fashioned out of stone. This was a great advance, for hollowing and boring stone by friction with sand and water are difficult tasks. It is thought that the polished flint hoes were used without handles, for the pressure of hands has left a lustre on the tools. Flint saws show polish

from the friction of sawing wood. For hunting the men still used only sling-stones; no arrows have been found.

One precious new substance was being introduced by barter in small quantities—a reddish soft stone which could easily be hammered into hairpins, needles, awls, and even twisted into small spirals (Frontispiece, *f*). Little did the Sialkians realize that by using it they were entering the metal age, for the new substance was copper. Centuries passed before their descendants discovered that it could be melted and run into moulds.

The women were much more expert potters than their great-grandmothers, and knew how to choose the best clay and mix it with the right proportion of chopped straw or grit. They had also learned to control the heat a little, when baking the pots, by making a hollow in the ground to hold both fire and pots. The shapes and patterns were much more varied, and already dishes on legs like fruit-stands were being made (Fig. 3, *b*). Grain was stored in large jars.

Other little communities like this sprang up along the pleasant borders of the lake, each on a carefully-chosen site within reach of the water, but not near enough to interfere with the wild animals which drank there, and always on the natural route from one district to another. Although each community was so self-contained, it had some contact with the outside world, for copper was brought from one hundred miles south, obsidian from the mountains round Lake Van, and turquoise from Khorasabad. It is worth studying this region on a large-scale physical map to realize what such bald statements imply, for this is the kind of country which might be expected to be impenetrable to Neolithic man. The close similarities in the cultures of the various villages prove that there was always contact between them; even formidable mountain ranges and great distances did not prevent peasants from migrating and visiting each other, as the excavations at Anau prove.

Anau.—Across North Persia lies the great barrier of the Ezburz Mountains, running from the Caspian Sea to the Pamirs. On the fertile strip to the north of the range is the oasis of

Meru, and there stands the famous mound of Anau. In the lowest strata are traces of villages similar to Sialk. The same evolution of painted pottery, with similar shapes and patterns, was found, and there also the farmer-hunters used only mace-heads and slings. So far as excavation has yet shown, they are the only Neolithic people who did not use polished stone axes. They lived in better houses than the Sialkians, for they made sun-dried bricks; but they still buried their dead under the floors. Even the ornaments of the two peoples were the same, for they both loved collars and bracelets of white marble beads. They used copper about the same time, too, and made toilet articles out of it. Accurate dating is impossible at this early period, but the general opinion is that the first settlers arrived at Anau later than at Sialk.

It is surprising to find Neolithic culture so widely diffused at such an early period. Probably before 5000 B.C. small villages were springing up from Iran to Anatolia and in Egypt. One area that early attracted farmers was the region around Mosul (Iraq), because its rich mud was so fertile. Neolithic villages lie at the base of the great mounds of Hassuna, Nineveh and Gawra, all in that district.

Hassuna.—The recently published account of the excavations at Tell Hassuna, near Mosul,¹ gives the first continuous picture of life in Iraq in the earliest known Neolithic periods, and also places in their right context odd items of information from other sites. Digging through the strata here was like turning over the pages of a history book and reading of the gradual development of a people.

In Level Ia are three habitation-layers without any trace of houses; so probably the first-comers lived in tents of skins or rough shelters. Around their sherd and stone-paved hearths they left a large number of well-made flint and obsidian implements, a fine lance-point of flint, polished greenstone axes, piles of sling-stones, jars and bowls of coarse buff pottery, and heaps of bones. One large jar was sunk into the ground, and by it lay a bowl which may have been used as a dipper.

¹ *Journal of Near Eastern Studies*, Oct., 1945.

The roughly made storage jars are of a peculiar and by no means primitive shape (Fig. 4, *a*). A few sherds of buff



FIG. 4—EARLY CULTURES OF HASSUNA AND NINEVEH

b, polished axe; *c*, arrow-head; *d*, flint knife; *e*, painted ware; *g*, sickle with overlapping flint teeth; *h*, axe with bitumen adhering; *i*, reed matting; *j*, bone spatula, pendant, and borer; *l*, spindle whorl; *m*, incised sherds; *n*, incised and painted sherds.

burnished bowls show that the women could make better ware if they chose. Of great interest is the one sherd with a line of red paint on it, for it is the earliest piece of painted ware known in Iraq. This pottery is quite unlike the earliest plain,

dark burnished ware of the west, and so it looks as though the Hassuna folk did not arrive from that direction.

If the chipped stone celts, which were fixed into handles with bitumen, were really hoes and the hollowed stones primitive querns, then the camp dwellers practised agriculture, and the large quantity of sheep or goat bones and the few teeth of oxen prove that they domesticated animals. Spindle whorls were found in all levels. So, even in this very early site all Neolithic crafts were known.

The Archaic Period.—By the time the village of Level Ib was flourishing the standard of life had improved, although much of the original culture continued. The people now lived in small houses, the very earliest known in Iraq. The walls were made of lumps of wet clay stuck together and smoothed over. Small stone hoes were still used to dig the garden plots, but now corn was reaped with slightly curved sickles set with overlapping flint teeth glued in place with bitumen. Curious pottery trays (Fig. 11, n), deeply furrowed or pitted, are thought to have been used for husking the corn, which was stored, not in granaries, but in large clay bins. These were carefully lined with gypsum and coated outside with bitumen to waterproof them, and then fixed in the ground. Women ground the corn between flat stones and baked the dough in barrel-shaped ovens very similar to those used locally today.

In the village at Level Ic the houses were larger and more varied in style and often built round a courtyard. One unique house was wheel-shaped, divided into V-shaped compartments, each with its hearth, bread oven, etc. People were still buried in their houses, and babies in pots. Unfortunately, no report has yet been made on the skeletons of these interesting people.

The potters had now learnt to temper their clay with grit instead of straw, and so produced finer vessels, which they covered with a smooth creamy slip. Only two shapes were made, bowls and globular jars, but the women experimented with several kinds of decoration, although their drawing was very crude. Incised patterns were scratched on the wet clay, or simple designs painted with a lustrous red paint; or a

pleasant contrast was obtained by using red matt paint on a polished surface. It is curious that the stone industry declined, though simple beads and pendants were still made.

This level reveals an orderly, prosperous community at the beginning of the painted pottery period, and excavators equate it with similar villages at Mersin, Amuq B, Jericho IX, and Sakje Geuze, while Childe sees resemblances to Thessalian Neolithic A ware. If "a sherd or two" is really like that of Nineveh I, they may "date" that elusive but much discussed lowest culture.

Nineveh.—The height of the mound, ninety feet, made digging both difficult and dangerous, so that the excavation pit had to be V-shaped to prevent the walls falling in; consequently it was narrow at the bottom. Fifty men were needed to form a chain to carry the baskets of earth to the top. Because of the small space excavated, little is known of the earliest strata. They are much thinner than those of Gawra, which was evidently the earlier and larger town. At Nineveh, on virgin soil or rather black mud, plain potsherds were the only relics of the people who first settled on a dry patch of mud by the river. In the next stratum were pots with incisions filled with paint, and also a very little roughly painted ware (Fig. 4, o, n). The interesting discovery of the two types suggests the meeting of peoples from the west and east, where each type was used alone.¹ Fragments of two vessels made from exceedingly hard stone show considerable skill in stone-grinding, and spindle whorls attest weaving. Lumps of clay shaped to seal vessels have marks of the knotted string which tied them down. This is the first known use of seals, which later played a prominent part in eastern life. Most tools were made of flint, but far over the mountain passes precious obsidian was brought for flaking into knives.

Gawra.—Near Nineveh stands the great mound of Gawra, 104 feet high with 26 levels, an epitome of prehistory on a grand scale. As the early strata are piled up to such a height, the lowest must be very early indeed. The excavator, Speiser,

¹ See front end-paper map for possible limit of early painted wares.

puts it at 5000 B.C., but it may be even earlier. Gawra reveals a long and splendid story, and to follow it is to realize how ridiculously inadequate has been our idea of the life of the Near East in the centuries preceding 3000 B.C., when the Golden Age was already a fading memory. Gawra's situation on the caravan route from the West to Iran, its proximity to the foothill villages, and, later, its nearness to the great centre of Nineveh and the shipping of the Tigris, gave it importance as a cosmopolitan town where people from the ends of the earth (as then known) probably exchanged ideas, fashions, and commodities.

A recent excavation at Qalat Jarmo in South Turkestan has revealed still another type of early culture in a district where wild grains grow abundantly. For a very long time (strata 4 m. high) men lived an unchanging life there, cultivating grain, but ignorant, it would appear, of the domestication of animals or the manufacture of pottery. Nevertheless, they built substantial houses of several rooms with floors and probably door-spaces covered with reed or basketry matting, and had silo pits in which to store their corn. Some grain kernels have actually been found. Like villagers with a complete Neolithic culture, they wore beads and pendants, made clay and stone figurines of the goddess and of animals, possessed plenty of bone and stone tools and querns; yet all their vessels were of stone, with the curious exception of a low basin of clay, which was baked in position on the floor.

Their village was near an east-west highway, and it is strange indeed if they were contemporary with early Neolithic folk of Iran and Iraq and yet were ignorant of mixed farming and pottery-making. The excavator of this site thinks they represent the first step in village life and are comparable with the little-known people of Jericho (Levels 17-10).

Lake Van.—The mere statement that tools of obsidian are found in many Neolithic sites in the Fertile Crescent and Iran seems of little interest, and yet behind it must lie tales of grim adventure, of long, arduous journeys, and of considerable organization, for all the obsidian was obtained from a volcanic

mountain hundreds of miles from the villages where obsidian was used.

A modern hiker would take about two months to walk from Nineveh to Van and back, though he would now have a road to make the journey easier. Moreover, mountain passes then were open only in summer; and even today bears lurk among unfrequented mountains.

Neolithic peoples must have organized trading expeditions, for many men would be needed to carry sufficient obsidian to last through the long winter season. At some time hardy pioneers actually drove their herds up the scrub-lined valleys and over the passes to settle by the lake-side, where the site of their villages is today a mound. The plain and painted potsherds found in it are coarse and rough—the work of an outpost people. It is significant that the obsidian tools and cores are very large, while those in the villages of the plains are all small.

It is rather thrilling to imagine bands of these primitive men of 6,000 or 7,000 years ago plodding over the mountain trails that converged on Van, intent on securing the coveted volcanic glass at all costs.

Mersin.—There are many other mounds still unexplored in Northern Iraq and Syria which cover sites of early Neolithic villages, but it is at Mersin in Cilicia, on the southern coast of Asia Minor, that excavation has revealed a culture as early or earlier than that of the camp dwellers of Hassuna, though of a very different type. The wonderful mound of Mersin is 65 feet high and composed of 44 levels. Its position is important, for it lies on the direct route from east to west, and so its early cultures were expected to show links between the two areas. Instead they are unusually isolated—in fact, almost unique. Further exploration along the westward coast of Anatolia is eagerly awaited, for at present it appears that while Europe slumbered in a lowly Mesolithic food-gathering age, Mersin, only 500 miles away, was the home of a clever people who arrived there with a marvellous flint and stone industry which has never been surpassed in the Old or New Stone Ages. They

used chert, flint, and obsidian, and their pressure-flaked daggers and lance-heads, blunt-backed knives and sickle-blades are works of art, as well as of the highest skill (Fig. 5, *a*). It is surprising to find that their greenstone polished axes are like those made in Switzerland 4,000 years later! They must have had long experience behind them, and all their interest appears to have been concentrated on the stone industry, for the rest of their culture is meagre. Only one piece of worked bone has yet been found.

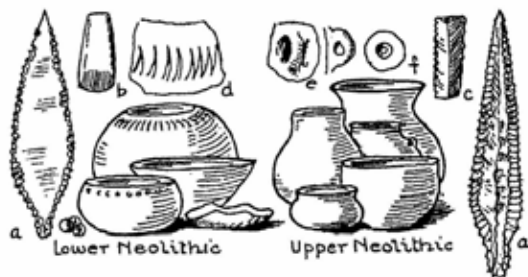


FIG. 5—EARLY MERSIN POTS AND TOOLS

a, finely flaked flint knife and dagger; *b*, polished stone axe; *c*, sickle flint; *d*, finger-nail prints on potsherd; *e*, lug; *f*, spindle whorl.

The pottery is fairly good, and the black ware is often well burnished and ornamented with marks made by a thumb or shell; a grey and dark brown ware is coarser. Only fragments of bowls have been recovered. This Lower Neolithic pottery is said to resemble the oldest of Ras Shamra (Syria). The only other articles recovered were rubbers (which might possibly have been used for grain), the lip of a stone lamp and palettes. It must be remembered that the earlier the culture, the narrower the excavator's trench, because of the great depth of the pit, and therefore the fewer articles recovered and the less comprehensive our view of the culture.

The estimated date of this interesting culture is before 5000 B.C.

Upper Neolithic.—Above 7·50 m. new influences, if not new people, were at work. The pottery was much finer, the buildings better; but the magnificent stone industry was on the decline. There are various grades of pottery; the finest was very thin and of a "porcelain" hardness, better than any at higher levels, and often made into quite large bowls. The colours, too, were beautiful—buff to glowing orange—and the vessels were often well burnished inside and out. Black burnished ware was occasionally ornamented with simple incisions and dots.

At this period woven garments were being worn, for spindle whorls have been found, and one potsherd possibly shows an impression of woven material. The huts were roughly built, with thick walls of river pebbles loosely packed with earth; floors were of beaten clay. The frequent layers of ashes are probably the remains of burnt reed huts, such as are still in use there today. Most interesting are some enormous boulders—apparently part of a fallen building, of which only a small section could be excavated. It is hoped that the whole will be cleared, for this is the earliest case known of the structural use of large stones, a custom which gained a great hold on men's minds later and produced the Megalithic culture.

Mersin and Ras Shamra seem to represent a stream of Neolithic culture different from that of Iran and Iraq. Further discoveries will perhaps reveal links between them, or indications of the direction from which they derived their knowledge of Neolithic life. Then we may be nearer to finding the original home of the first farmers.

EGYPT

While the ancient East was awakening, tribes in widely-separated parts of Egypt were developing distinctive cultures of their own. Whether these were introduced from abroad or evolved in the Nile Valley is another of those alluring

questions which arouse so much controversy and receive no certain answer.

Merimde.—On the western marshes of the Nile delta was a large village of 600 m. by 400 m. which is of exceptional interest, because so much of its culture seems to have spread along the North African coasts, reaching Europe about 3000 B.C., and ultimately being brought to England by the first Neolithic peoples.

The Merimde farmers had achieved some degree of organization, since they built their small huts down a street and co-operated in irrigating their fields of wheat (emmer), barley, and flax. Large numbers of cattle and pigs were kept, but few sheep or goats. Their harvesting was no haphazard affair, but well planned. Straight, flint-toothed sickles were used to cut the grain, which was threshed in special clay-lined hollows, drained by a flask in the middle. It was stored in large pits or silos carefully lined with coiled basketry (Fig. 6, *ze*).

Sickles were more numerous than weapons, but the men did hunt in the well-stocked marshes, and seem to have had a taste for hippo meat. For weapons there were bows and hollow-based flint arrow-heads, maces, and polished flint daggers. Fish, as much as they could desire, was caught with antler fish-hooks or harpooned. The polished and flaked stone axes were copied in miniature for pendants; if these, as is probable, were amulets, the widespread belief in their magical nature goes back to very early times. The Merimilians probably wore linen clothes, for they had spindle whorls and flax, and they decked themselves with necklaces of shells or boar's teeth, bone rings, and ivory bangles. Every woman owned a slate palette on which to grind the green malachite eye paint that helped to counteract the glare of the sun (Fig. 6, *k*).

Their thick black pottery (so like the earliest English) was simply moulded to imitate the shapes of their leather bags; but, curiously enough, peculiar and advanced forms were also made, such as rough pedestalled bowls, cups with feet, twin cups fastened together, goblets, and pottery ladles. Hundreds of years later many of these forms appear in Europe. None of

the pots was decorated or had handles, but some had lugs for suspension (Fig. 6, *a-d*).

Like many people of the Near East, they buried the dead in their huts without offerings, but whether the huts were then burnt is unknown. Sufficient skeletons have been found to prove that they belonged to a branch of the Mediterranean race with long, but rather wide, heads, and were totally different from the Tasians or Badarians.

Even as they lived in this pleasant village the climate was changing and the desert encroaching; sandstorms half buried it frequently. Eventually life became unbearable, and the last remnants of the people abandoned it to the sand which overwhelmed it so completely that it was forgotten until recent excavation brought it to light. What happened to the inhabitants who were driven away at intervals, and at last permanently, is one of the most fascinating problems of pre-history, because their descendants or their culture so greatly influenced the culture of Western Europe. The date of Merimde is the subject of much controversy, and estimates given vary from 5000 B.C. to 3000 B.C.

The *Fayum* was the home of a related group of Neolithic people in early times when a beautiful lake attracted myriads of birds, a variety of wild animals, and men to live on its reed-lined shores. A sandrock cliff near by gave shelter and support for huts; the soil was extremely rich and the fishing and hunting perfect. So contented were the people that they never seem to have gone farther than the neighbouring escarpment to hunt or obtain chert for implement-making. They came with the same general culture as the Merimilians, but not as full or advanced. It is uncertain whether they kept domestic

FIG. 6—MERIMDE AND FAYUM CULTURES

- MERIMDE: *a*, "leather-bag" pottery; *b*, knobbed ware; *c*, ladle; *d*, twin vases; *e*, flint knife; *f*, polished stone axes; *g*, mace-heads; *h, i*, bone fish-hook and pin; *k*, slate palette; *l*, hollow-based arrow-heads; *m*, shell bead; *n*, axe amulet; *o*, flint sickle blade.
- FAYUM: *p*, hollow-based arrow-heads; *q*, twanged arrow-head; *r*, leaf-shaped arrow-head; *s*, flint halberd blade; *t*, flint dagger; *u*, flint knife; *v*, sickle blade; *w*, sickle with flint teeth; *x*, flint knife; *y*, flint and polished stone axes; *z*, waisted pebble; *zc*, bone points and harpoons.

animals; it has been suggested that herding might have been precarious in such a rendezvous of wild beasts. Their pottery is coarse and monotonous (Fig. 7), and they never carved ivory, although tusks lay about their village; but they excelled in all kinds of basket-work and reed matting (Fig. 6, *ze*). Their grain-pits were lined with beautiful coiled basketry. Of great interest are their numerous hollow-based arrow-heads of many varieties, which are exactly like those of Megalithic Spain about 2500 B.C. (Fig. 6, *p*). As no graves have been found, we probably have a very inadequate idea of the culture of these people



FIG. 7—FAYUM POTTERY

who lived about 7,000 years ago, according to the careful researches of their excavator.

Badarians.—Away in Upper Egypt a charming people lived at Badari, and we have an amazingly full knowledge of their life, their clothes, and even their bodies, which have been preserved in the sand. The climate was cooler and more moist then than now, so that large trees grew on the spurs of high land under the cliffs above water level. There the Badarians lived and looked down an endless stretch of reedy marsh intersected by lanes of open water, where hippos and crocodiles wallowed, and countless wild birds rose from the thickets of papyrus reeds which were so tall and sturdy that they were excellent for boat- and hut-making. So numerous and attractive are the objects found that it is difficult to realize that these folk lived perhaps 6,000 to 6,500 years ago.

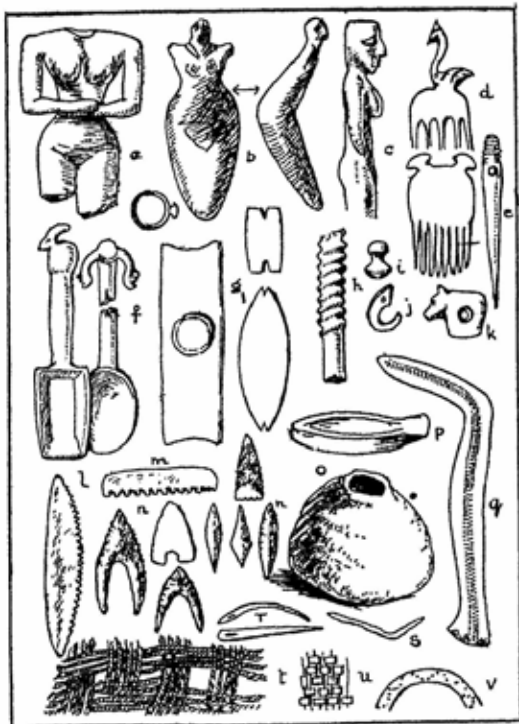


FIG. 8—THE RICH CULTURE OF BADARI

a-c, diverse types of figurines (a, painted red; b, of unbaked clay; c, unusual type in ivory); d, combs; e, f, pin and spoons of ivory; g, slate palettes and grinding stone; h, ivory rod; i, greenstone nose ornament; k, hippo pendant from child's grave; l, flint knife; m, sickle flint; n, flint arrow-heads; o, grain bin; p, model of boat; q, incised wooden boomerang; r, bone needles; s, copper awl; t, matting; u, steatite bead-work; v, ivory bracelet.

Because the debris left from the villages is only shallow, it is thought that, in spite of their advanced culture, the inhabitants did not stay long on one site. They were a slightly mixed race, but most of them had small slight figures and faces with delicate features, narrow jaws, and narrow high heads covered with thick and wavy black or brown hair. The men wore their hair long, and the women never allowed theirs to grow beyond eight inches; but they plaited it, curled it into ringlets, and one woman set the fashion with a curly fringe! Some people had sandy hair, and one golden-haired child has been found.

The majority closely resemble the Somalis, the Dravidians of India, the Veddahs of Ceylon, and the earliest Predynastic people of Egypt. Although they were a small race, a few muscular men reached six feet.

The men were very particular about their toilet—most were clean shaven, and all had razors. Some men, women, and children wore linen kilts and caps, and it was cold enough for skin garments with the fur inside, as well as fine soft leather clothes with carefully cut fringes. The weaving was not amateurish, but as good as some of later times. Men and women were fond of jewellery and decked themselves and their dead relatives in all they could get.

The dead were provided with the best of everything; some even carried pieces of linen in their hands which may have been the first handkerchiefs. A man with a linen kilt was evidently very rich, for over it he wore a fine skin tucked under one arm and over the other, and round this was wound several times a girdle made of hundreds of small glazed beads threaded on flax. He had a shell bracelet on one arm and on the other a leather thong and a greenstone pendant.

In their wavy, dark hair these folk wore feathers, tall ivory combs carved with animals' heads (Fig. 8, *d*), or bands of gaily coloured Red Sea shells. For necklaces and bracelets and girdles they had beads of spirally-twisted copper, glazed stone, turquoise, carnelian, quartz, felspar, ostrich shell discs, and shells. Not so much to our taste is the greenstone nose-plug found in position (Fig. 8, *i*), but the hippo amulet of green jasper

(Fig. 8, *k*), the ear-rings, the ivory bangles inset with bright blue beads, the ostrich feather fans, and the ivory toilet pots and hairpins would delight a modern woman (Fig. 9, *d*). For "make-up" they used castor-oil to polish their bodies, malachite to paint round their eyes to enhance their lustre and reduce the sun's glare, and rouge for lip-stick. Every woman owned a palette on which to grind her face-paint (Fig. 8, *g*).

Although the reed-and-mud huts seem poor flimsy affairs, they were comfortably furnished and had low beds with closely-plaited straw mattresses, pillows of fine leather or linen filled with chaff, and "blankets" of beautiful fur and soft leather. Reeds from the marshes were woven into fine matting, baskets, and probably screens. Cooking was done in front of their huts, where cooking-pots, resting on charcoal in shallow hollows, have been found.

In irrigated plots the Badarians grew wheat (emmer) and barley, and though they had no pigs they probably kept oxen, sheep and goats. For hunting they had learnt to make thin wooden boomerangs, but they also used hollow-based and leaf-shaped arrow-heads (about which much will be heard later), bone points, and maces. Their wonderfully flaked curved knives with saw-edges have a Solutrean retouch of great beauty. As so few sickles have been found, it is thought that the cereals were pulled up by the roots. They probably fished with little bone-hooks and nets (Fig. 9, *d*).

Here, again, were peaceful folk living without warlike weapons in their little paradise. Very few of their skeletons have broken bones, but a few show signs of tumours and arthritis. As in most primitive communities, the death-rate among children was very high.

Models of boats suggest that the Badarians used the river as a highway (Fig. 8, *p*). Certainly they were in touch with other peoples and traded for articles that came from a distance, such as copper, malachite from Sinai, shells from the Red Sea, and porphyry from Nubia. Maybe they had indirect contact with some advanced eastern cultures, for their numerous steatite beads were covered with a blue and green glaze, and it is

unlikely that they could manufacture such a difficult product. They may have learnt to use copper through dropping malachite into the fire and, finding that it turned into a soft stone, hammered it into little things like beads and borers and needles.

Of religion there is little trace. It is uncertain whether the few female figures represent the Mother Goddess, though amulets of gazelles and hippos suggest that the later Egyptian totem cults were already forming (Fig. 9, e). Sometimes animals received the same careful burial as human beings. Dogs, sheep, oxen and gazelles, wrapped in mats and even precious linen, have been found in well-made graves lined with stones. In one grave were fifteen dogs of all ages. This seems more like an animal cult than sacrifice.

Everything possible was done to ensure the happiness and comfort in the next life for men, women, and children alike. At Badari bachelors appear to have been buried in a special area: if so, it seems that men outnumbered women. A few people had their pet gazelles, and probably cats, buried with them. All had a food-pot near their hands, and one person a plate with bread on it! Graves dug in the sand were lined with matting or were hut-like structures of sticks, reeds, and matting, and the bodies were frequently in rush hampers or coffins, while a few were placed on beds or biers. They were laid to rest on pillows and covered with skins or soft leather, and all faced the sunset.

A child of ten lying in a rush coffin wore necklaces of shells, blue beads and carnelian, and her little hands rested on a slate palette so that she could easily paint her eyes in the spirit world. Before her face were a bowl and an ivory spoon; her anxious mother intended to make sure that she had her porridge every morning! A baby was given ostrich-tips to place in her hair! Several men had bead girdles, one of 5,000 blue glazed steatite beads. The living did not grudge anything to the dead.

The Badarians probably believed that their absent friends lived in the cemeteries, for still among the graves, lying in hollows filled with brushwood, are large cooking-pots containing grain and meat chopped up with flint, saw-edged knives.

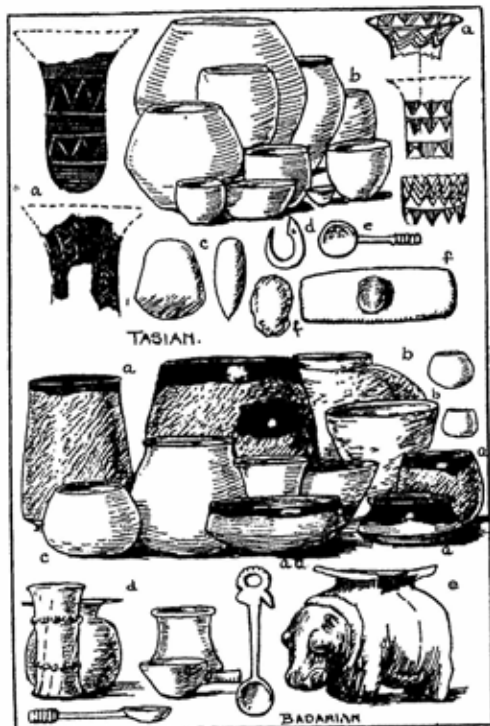


FIG. 9—TASIAN AND BADARIAN POTTERY, TOILET WARE, AND TOOLS

TASIAN: *a-f*: *a*, incised beakers; *b*, plain ware store jars and bowls; *c*, polished stone celts; *d*, *e*, bone fish-hook and toilet spoon; *f*, palette and rubbers.
 BADARIAN, *a-e*: *a*, ribbed ware; *b*, coarse cooking-pots; *d*, ivory and alabaster toilet pots and spoons; *e*, hippo amulet.

Evidently great family feasts were prepared there for the dead and living to share.

The Badarian women were expert potters, and one needs to handle their ware to appreciate its thinness, fine texture, and polish. The surface is satin-smooth and covered with graceful oblique ripple markings made by a fine comb. The pots were laid mouth downwards on an open fire so that the tops were blackened by the smoke and the rest remained dull red. Another variety is a fine polished black ware, often pattern-burnished, and for common or kitchen use a coarse, badly-fired pottery was made in large quantities. The shapes are bag-like or copies of leather bottles, or leather bowls with shoulders shaped by the insertion of withy hoops to stretch them. For ladling out the stew or porridge square-bowled spoons with animal-headed handles were carved out of ivory. There was no mass production; each was different from the others (Fig. 9, *a-c*).

More is known about the Badarians than about any other early people, but it is obvious that they had advanced far beyond the experimental stages of Neolithic life.

Tasian.—The Tasians seem to have been the forerunners of the Badarians, and they practised the same culture in many ways, but on a more meagre scale. There are, however, puzzling and notable exceptions. The pottery is quite different and consists of endless bowls with narrow necks of varying sizes, and of rougher brown or greyish-black ware (Fig. 9, *b*). Black-topped or red pots are exceedingly rare, and the only ripple-marked one known has vertical ripples, while the Badarians' are all oblique. The most interesting type is a dark trumpet-shaped beaker with two holes in the rim and bands of cross-hatched triangles filled with white paint. These are one of the surprises of archæology. They are unique, except for the exactly similar but plain beakers of the Michelsberg culture of the Rhine and Switzerland of 2,000 years later, and yet no intervening links are known. The models for these pots were the leather bags made from animals' scrota such as are still used by some races. The triangular pattern on the Tasian

beakers appears very persistently on the Megalithic figurines of Portugal of 2500 B.C. (Fig. 44, a).

The Tasian flint implements are not as fine as the Badarian, but many polished stone axes were made for wood-chopping. The few skulls so far described are quite different from the effeminate Badarian skulls; they are square-faced and wide-jawed, of rugged type. The relationship of these two peoples awaits further investigation.

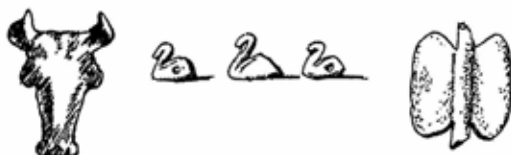
One of the most controversial subjects of archaeology has been the role of Egypt in prehistory, and each new excavation, so far from pointing to a solution, adds to the complexity of the problem. Before the dawn of Neolithic cultures the Nile Valley seems to have been very self-contained and to have evolved indigenous cultures.

Until recently the next stage appeared to be that of fairly advanced and widely separated agricultural villages; but the discovery of the pottery-making nomads of Khartoum probably reveals a link between food-gatherers and Neolithic peoples. It also raises the problem of the origin of the Neolithic way of life. Did the knowledge of agriculture, the domestication of animals, weaving and pottery-making, originate in one area at roughly one period or were they acquired by different people at varying periods?

At one time it was thought that when men settled to farming, women made pottery; but now it is known that several comparatively advanced Neolithic communities did not use pots, and that the Khartoum food-gatherers were good potters. If pottery originated in Africa—there is early pottery in Kenya—how did it reach Syria, Iran, and Iraq? Moreover, these countries have very early pottery of a very different kind from that of Khartoum.

Egypt may possibly be the first home of agriculture, but hardly of the domestication of animals, while the high plateaux or foothills of the Kurdistan mountains might well be.

One fact must be remembered: travel was easier in those days, because the heavier rainfall made at least partially fertile much of the land which is now desert.



CHAPTER III

FROM VILLAGE TO TOWN—LATE NEOLITHIC AND CHALCOLITHIC

WE have seen that the earliest traces of Neolithic peoples reveal a very simple way of life, but not a standardized one. The flint industry of Mersin was superb, but there were no domestic animals; Anau had not the commonest Neolithic tool—an axe; the first settlers at Ras Shamara and Jericho did not make pottery. Except in Egypt there was strangely little sign of religion or care for the dead, far less than in the Old Stone Age. Some peoples—the Badarians, for instance—had a fairly advanced peasant culture, while others, like the Hassuna camp-dwellers and the first inhabitants of Mersin, lived on a much lower level.

The comparative age of all early sites is very uncertain, and so far even the approximate dates given by archaeologists vary greatly. The height of a mound is the main guide to its age, for it is known how long an eastern village of mud bricks survives, and this period can be multiplied by the number of layers in a mound. The first reliable date is about 3000 B.C., and most mounds grew twice as high before that date as they did after. Many factors, however, may influence the destruction of a mud village; some houses may have been built more strongly than others or had stone foundation walls. Invasion levelled villages much more rapidly than gradual decay, and some sites were abandoned and then re-inhabited. With all these possibilities it is surprising that there is such general

agreement among experts regarding dates. As excavation has progressed, the more probable has it become that the Neolithic way of life was well established in many places long before 5000 B.C. On a chronological table cultures should not be fixed in static positions, but should oscillate slightly up and down until further research entitles them to a fixed position.

After the early stages of Neolithic life came long ages when gradually, but very slowly, improvement in farming and building took place, and peoples in widely separated villages began to experiment in painting their pottery. This period is best known at Tell Hassuna, though in most sites the changes brought by the influx of new peoples or ideas and the effect of increasing trade can be followed. In a book of this size, however, it is possible only to glimpse early life at long intervals, and so we turn now to the end of the Neolithic period, which merges into the Chalcolithic period.

Copper was in general use but still scarce and precious and treated as a stone, while flint was used for implements and weapons. In many cases the simple self-sufficient village had grown into a well-organized social unit with considerable trade, well-built houses, and usually a definite religious cult. Still it had essentially a Neolithic civilization, largely self-sufficient, peaceful, and apparently democratic. The only way to realize its essential qualities is to contrast it with the war-making, slave-taking, king- and priest-ridden, luxurious Bronze Age. Gordon Childe, in *What Happened in History* (Pelican Series), gives a splendid bird's-eye view of all early cultures.

Sometimes the Chalcolithic culture is called the Halafian, after the site of Halaf, which has given its name to the beautiful painted pottery that spread over and influenced much of the civilized world of that day.

Sialk II.—At the end of the Neolithic period the village of Sialk (Level II) had grown much larger, and though the people carried on many of the old traditions, they had progressed considerably and new influences had crept in. Although some folk still lived in pisé huts, others built good-sized houses

with foundation walls, floors of sun-dried bricks, and doors that swung on stone pivots. The women were becoming house-proud, for they painted the clay-plastered walls of their rooms red. The technique of stone-grinding had been greatly improved by the invention of a prismatic drill, so that men were able to make many beautiful bracelets of white marble and veined and transparent alabaster beads of the hardest stone and fine stone vessels. They had more copper than their predecessors, but it was still treated as a soft stone to be hammered into buttons and bracelets, awls and pins. Contacts with the outside world had widened considerably, for to their village came turquoise from Khorasan and precious shells from the distant Red Sea and Persian Gulf.

They were still peaceable, simple farmers, hunting with sling-stones and maces, laboriously digging their garden plots with chipped and polished stone hoes held in the hand, caring for their animals (including pigs) and keeping dogs as pets and guards. The bones of horses were found in their houses, but probably the horses were hunted and not domesticated. Little baked clay figures of their flocks must surely have been modelled for some magical or religious purpose.

The women made very fine red pottery. As they now baked it in ovens, the heat could be partially controlled and the pottery more evenly cooked. The black decoration on the red pots is delightful. Much of it is based on the Sialk basketry tradition, but a great innovation was the use of animal designs. Surprise and shock for theorists lie in the fact that the potters painted charmingly naturalistic figures of animals and wild birds on one vase, and on another painted the same creatures in such a stylized fashion that, if the intervening stages were not shown on other pots, it would be impossible to tell what they represented. A vast amount has been written about the evolution of stylized designs from naturalistic drawings and the corresponding sophistication and maturity of the artists; but the peasant women of Sialk destroy such theories by being experts in both techniques at the same time (Fig. 10)!

People such as these lived round the great desert basin of

Iran from Anau in the north to Khasau in the south, from Chashmak Ali in the west to Baluchistan in the east.

Buff Ware Culture.—In the south was another culture, even more widespread, from the Kermanshal-Hamadan road to Fars, Laristan, and Kirman. Because of its buff-coloured pottery it is called the "buff ware culture," but little is known of the people who used it. From excavations at Giyan (V) and Bakum (II) they seem to have reached much the same stage of culture as the Sialk farmers. As time went on Neolithic people spread wherever the land was suitable for cultivation and grazing, until from Anau and Sialk across the then fertile plateau to India and the Indian Ocean potters painted their



FIG. 10—NATURALISTIC AND CONVENTIONAL DESIGNS ON SIALK II POTTERY

pots in villages which shared a common life in a remarkable way for such early times. Sir Aurel Stein, riding over the desert of Fars and Baluchistan, has followed their trail by searching for painted potsherds and village mounds which tell their story. Before these folk had spread so far, however, the Bronze Age had dawned in the old centres of civilization, and Sialk had become a town with a new broad-headed population settled alongside the old Mediterranean race.

Meanwhile, away in Iraq, on the lower foothills of the Anti-Taurus, and especially near Mosul on the upper Euphrates, a large number of prosperous villages existed in late Neolithic and early Chalcolithic times. They were probably inhabited by hill folk of Mediterranean type, who, having already learnt agriculture, were attracted by the very rich soil of the district

Apparently they encountered no opposition, for they had no weapons and built undefended villages, and they were sufficiently undisturbed to erect village after village on one site for hundreds of years. Agriculture was easy in this fertile soil (with sufficient winter rain), and they had time to cultivate the Arts—in their case chiefly the art of pottery painting.

Hassuna Levels 1c-V.—In the flourishing village of Hassuna during the Chalcolithic period "Archaic" ware was replaced by what is called "Standard" ware, but whether this indicates a new people or merely a new fashion is not known. The pleasing contrast between a dull surface and shining black paint or vice versa was no longer appreciated; dull black or brown paint was applied to a matt surface. This ware is like that of Nineveh I (Fig. 11). There was little variety in the designs, but a unique technique was introduced—the combination of incised patterns with painting; and these folk founded a tradition to which later generations clung even when, from Level III onwards, the greatly superior Samarran ware was imported. This wonderful pottery presents a pretty problem. It is distinctive and excellent, and it appears in a few sites from Samarra (in South Assyria) to North Syria, yet it is never associated with any particular culture or people (Figs. 11 and 12). In the modern world we should trace it to a factory, such as the Wedgwood or Crown Derby, but in the third millennium B.C. it is uncertain if there were even specialized potters, though it is hard to believe that the best Samarran pots were made by peasant housewives. On the other hand, how could such delicate ware be traded over such long distances, when even pack-animals were unknown? In any case, would the prehistoric peasants buy pots (we know they valued and mended them), or were pots traded for something they contained? If so, the lovely plates have still to be explained; they must have been treasured for their own sake. Yet if this ware was all made locally, why is it so similar over the whole area in which it is found? So difficult is it to account for its spread that some archaeologists postulate a guild of wandering potters, like the travelling smiths of the Bronze Age!



FIG. 11—THE CHARM OF EARLY POTTERY

Until recently it has been uncertain whether Samarran ware was earlier than Halafian, but at Hassuna it occurs in large quantities long before any Halafian pots appear. Its origin is as mysterious as ever, for though it links with the pottery of Iran, there is no certainty that it is derived from that source. It does not seem to be related to Halaf ware.

By the time Samarran pots were treasured in Hassuna households, the people were living in substantial dwellings of several rooms which opened on to a courtyard, and, as the walls still stand one metre high, it has been possible to make a good reconstruction. The result is curiously like the present houses in near-by villages. Repeatedly excavators find that life has changed remarkably little in primitive communities during 5,000 or 6,000 years. Doors swung on stone pivots, bins were sunk in the floors, bread-ovens were carefully constructed, the threshold was paved with stones and potsherds, a stone drain carried off the water, and in the courtyard was a low wooden bench on which the old men could sit in the sun! It would not seem strange if this early village could come to life today.

After Level VI very little Hassuna pottery was made and Halaf ware took its place. Such a drastic change surely means that the indigenous people were conquered or replaced by new-comers, and the succeeding villages fell in line with other centres of Halaf culture.

Halaf pottery, or pottery strongly influenced by it, was made in Iran, Syria, and as far south as Ghassul in Palestine. It is interesting to consider the hold this bright, vigorous, and artistic pottery had on peasant farmers' wives who never heard of each other and lived hundreds of miles apart. The excellence of the best of this ware and the skilful draughtsmanship of the designs suggest that it was the work of professional potters with trade secrets passed down from father to son and with a long training. There was, however, a great deal of very inferior ware made with slap-dash painting. So it looks as though the women tried to imitate the work of the master potters.

Arpachiyah.—It is easy to distinguish this pottery from all others, yet although thousands of sherds are known, very few plates and vases are alike. At Arpachiyah, near Nineveh, where hundreds of sherds were collected, no two are duplicates. When the simplicity and limited scope of the designs are considered, it says much for the ingenuity and keenness of the potters that they could combine so few motives in so many delightful patterns. Rarely in art has so much been made of so little (Fig. 12). Colours, too, were limited, and in the best examples only black, white, buff, and red were used; yet monotony was avoided, and the glowing, rich, and lively colour patterns, beautifully executed, gave a unique charm to this marvellous ware of a simple people. To appreciate how generations of potters succeeded by trial and error in mastering every difficulty it is well worth while to read a most interesting account of the excavations (with coloured illustrations of pots) at Arpachiyah in *Iraq*, Vol. II, Part 1. In the earliest villages pottery was unevenly baked, the painting jerky and colours uncertain, but it gradually improved till in the stratum known as T.T.6—the heyday of Halafian culture—technique, form, and design reached perfection. The earliest painters often used rather naturalistic designs of animals and vegetation, but soon these were so stylized that they became part of a geometric pattern (Fig. 12, *a, b, c*). A favourite motive, which may have had a religious impetus behind it, was the bull's head or *Bukranium*, of which a few examples out of an astonishing variety are given on Fig. 12, *b*.

It is almost ludicrous to turn from the charm of this pottery to the simplicity of the homes of the potters. They lived in small rectangular rooms, with floors and walls of pisé or beaten clay and roofs of matting covered with clay. On the outskirts of the village were poor reed-and-wattle huts. The ground was so muddy that roads of pebbles had to be made, and workmen excavating the site found them still useful!

At the time of the sixth village (from the top) the culture reached its height only to be destroyed by ruthless invaders who savagely broke everything in the headman's large house, flung



FIG. 12—THE BEAUTIFUL HALAF POTTERY OF ARPACHIYAH

a, early naturalistic designs; b, increasing stylization of bull's-head motive; c, late geometric patterns.

his pots from room to room, and then set fire to it all. The roof of reeds and mud and the mud walls crashed in and buried the contents so well that excavators have been able to dig out everything, piece together the beautiful pottery and figures, tools, and ornaments, and reconstruct the house. Two upper rooms contained a hundred and fifty objects. It seems that this wealthy headman was also a potter, a maker of stone vases (and amulets?) and flint and obsidian tools. Pots and jewellery were lying close to the wall on carbonized wood, which must have been the shelves or tables of his show-room. In the stone-carver's workshop were thousands of cores and chips left by the workmen, some of whom were experts, for they carved tiny figures (a male one only three-quarters of an inch in height) in stone, delightful little ducks in soapstone, butterflies, double axes and other amulets, as well as marble vases (chapter heading). One necklace is interesting, for with obsidian beads are cowrie shells cut across and probably filled with colour. Later, cowries were widely venerated because they were believed to possess life-giving power.

Some of the finest large plates (up to fifteen inches in diameter) were found here. The design in the centre is always rayed—sometimes a Maltese cross or a sunflower; the border is a close and marvellously accurate chequer pattern, giving almost a suggestion of rich embroidery in black, white, red, and ochre. In Arpachiyah very little metal was found, and it is thought that even the advanced phase seen in the potters' shop occurred before 4000 B.C. That these folk did not use their painted ware merely for ornament is proved by the discovery of a painted jar containing the earliest known grains of wheat in a circular granary pit or silo like those in use today.

The most interesting finds at Arpachiyah are related to religion, and they have thrown a totally unexpected light on Cretan cults which flourished 1,000 years later. The widespread use of a double axe amulet was once supposed to have originated in Crete, but the Arpachiyahians had it, along with other favourite Cretan cult objects such as the dove, the bull's

head, and squatting figurines of women and serpents (Fig. 13, *a-g*). Female figurines, which played so large a part in Palæolithic life, have not been found in the earliest Neolithic sites, and only recently a couple were discovered in the pre-Halaf levels of Hassuna. Otherwise none are known till Halaf times, when they occur everywhere west of Iran.

The Mother Goddess cult and ritual gradually became the dominating influence in the lives of people of all races from India to Britain, and it still retains its hold on some peoples today. It has always been connected with fertility and good luck for men, animals, or plants, for through sympathetic magic the little figures were supposed to give increase to women and flocks, and freedom from hurt to the people who owned and worshipped or cajoled them. Usually the head was not modelled, but left as a stump. The only parts of the body that mattered were those connected with motherhood, the creation and sustenance of life; and any crude model that represented the type was efficacious. Nevertheless various types of figurines were evolved, all of which archæologists once thought originated in countries farther west: Cyprus, the Cyclades, Crete, etc. So it was an immense surprise to find many of them at Arpachiyah hundreds of years before they appeared elsewhere (Fig. 13, *a*). Models of doves, serpents, and domestic animals are very frequently connected with the Mother Goddess cult.

The bull was generally the symbol of male virility and strength, and a beautifully carved bull's head amulet, along with the same motive painted on pottery, shows that it was an important element in the people's life (chapter heading).

How far religion or ritual was organized it is impossible to say, but certainly it was long past its most primitive stages. Perhaps buildings of a type unknown before in the Near East have some religious significance. They are circular structures (called "tholoi") with pisé walls on wide foundation walls of river stones (Fig. 13, *i, k*). The earliest at Levels 9-10 consist of one chamber, but by Levels 7-8 a long rectangular entrance was added. One of great interest for western archæology is



FIG. 13—BUILDINGS AND TREASURES OF ARPACHIYAH

a, female figurines in stages of degeneration; *b*, model dove; *c*, model finger-bone and beads; *e*, stone axe; *f*, cult objects (?); *g*, amulets; *h*, stamp seal; *i*, *k*, ruins and reconstruction of tholos; *j*, house amulets; *l*, plan of a tholos of unusual type; *m*, sagging roof of modern underground granary.

shown in Fig. 13, *l*, where the antechamber lay at right angles to the main building and the whole was partly sunk in the ground and had a sloping ramp. It was built entirely of pisé, and enough is left to show that the roof was a low dome. All these points may throw light on the origin of Mediterranean tombs which influenced Megalithic building in the west.

That all the circular rooms of the tholoi were domed is likely, but whether the entrance was roofed at all is uncertain. Mr. Mallowan reports that long modern underground granaries in the neighbourhood have a sagging gabled roof like that on a steatite amulet found at Arpachiyah (Fig. 13, *j, m*). Occasional traces of carbonized wood lying among the pisé suggest that the roofs were made of wood. For what purpose such structures were used it is difficult to decide. They were not houses, nor were they tombs; but evidently it was well to be buried close to them, and near one were a number of figurines and fine pots. They must have been held in awe or respect by the peoples who built the superimposed villages, for foundations of old tholoi were never taken to pieces to build new ones, but fresh stones were brought up from the river. There were no ovens or hearths in these remarkable buildings; so it is doubtful whether they were houses. The largest is in the centre of the village and had walls three and a half feet thick. Mallowan thinks that this was a fortress or refuge for the villagers in times of danger. It seems more probable that the tholoi were some kind of sacred building, and because of their sanctity men imitated them for tombs, as in Crete or Cyprus hundreds of years later.

Unfortunately there is little to be learnt about the people who so strongly influenced future generations and other races far beyond their ken. They seem to have gone about their daily work among their flocks and fields, with visits to the market town of Nineveh close by, much as local farmers do today. Their potters had some contact with Halaf, ninety-five miles away, and probably with other towns of North Syria, but otherwise they lived apparently in a little world of their own.

Khabur River.—The triangle formed by the tributaries of this river, which joins the Euphrates at Hasaka, must have been one of the most densely populated districts of Chalcolithic times, for it is so thickly studded with tells that forty can be seen from Chagar Bazar (front end-paper map). In fact, North Syria seems to have been more popular in these early days than later, for the top strata of many tells contain a Chalcolithic village. People who farmed the fertile Khabur river area soon found that below Hasaka there was not sufficient rain to produce crops, and so all their villages lie to the north.

Chagar Bazar is one of the most interesting sites. This mound has sixteen levels and is sixty feet high. The lowest level contains only incised and burnished ware, like that of Sakje Geuze, and, as this is typical of the west, probably the first settlers came from that direction. Later, beautiful Samarran ware appeared, and with it the earliest known inscribed seal, engraved with dancing bird-like figures (Fig. 14, c). The Mother Goddess statues have painted on them striped jackets and trousers such as Kurdish women wear today; so here fashion has remained unchanged for more than 5,000 years (Figs. 11, k; 14, a). The growth and decay of village after village and city after city on this site is a wonderful story which can be read in *Iraq*, Vol. III, Part 1, 1936.

Mersin (Proto-Chalcolithic Levels 12–9.25 m. from the top).—Half the great mound of Mersin consists of the ruins of Neolithic villages, but at 12 m. new peoples from the East either conquered the first craftsmen or peacefully introduced new customs. For the first time substantial houses of mud brick, with corner-stones of dressed limestone and stone-paved floors, were built. Circular or oblong domed silos for corn were made of pebbles packed in mud. It is curious that the stone industry (chiefly obsidian) continued to follow the old tradition, though it was poorer, and no polished celts have yet been found with it.

The new-comers introduced the painting of pottery, but evidently they had not much experience, for their first designs were merely bands of colour round the necks of their pots.



FIG. 14—HALAF, SAMARRAN, AND PROTO-HALAF POTTERY

a, figurine in striped (painted) costume and figurine in turban sitting on low stool; c, impression from earliest known cylinder seal; d, butterfly amulet; f, naturalistic designs on early Samarran potsherds; g, red, brown, or black paint on buff ware from Proto-Chalcolithic Mersin.

Gradually, however, they experimented with parallel lines, checks, and chevrons, which were sometimes combined to make simple but effective patterns on bowls and jars (Fig. 14, g). Some of the later pottery is said to resemble that of Nineveh I, but other pieces appear to link with Thessalian ware, and others are like a few odd sherds from Alishar. Certainly Mersin seems a suitable site to make a link in the chain between eastern and western cultures. There are many sites on the south Anatolian coast not yet excavated, which may yet add more knowledge.

Above these Proto-Chalcolithic strata is a sterile layer; so the site must have been deserted until the arrival of people of late Halaf culture, bringing a more advanced and war-like civilization. Before long a city with massive walls and gate towers, barracks and chief's house crowned the mound. Probably this dates from the second half of the third millennium B.C., when the life of the Middle East was changing rapidly.

The early history of Palestine and Western Syria is gradually being unravelled, but is not yet quite clear. The land was much more fertile in early days than it is now, and it seems to have been well populated. One of the great centres of "civilization" throughout prehistoric times was Jericho.

Jericho.—Prof. Garstang's excavations of this site have produced very surprising results and lively controversy. He found seventeen habitation levels, and he counts from the surface: so Bronze Age is I–VII, and VIII–XVII he calls Lower, Middle, and Recent Neolithic, below which lay 2 m. of Mesolithic culture like Natufian III and IV or Tahun. Most archaeologists, however, think that here, as elsewhere in Palestine, there was no Neolithic period, but that the first agriculturists were Chalcolithic people who came, probably, from Syria. No copper was found in Jericho in these levels, but very little indeed turned up in the Bronze Age layers, and metal of any kind was extremely rare in Palestine until late. When there was only a small quantity it was used again and again, and tomb robbers never failed to search for it. Far more extraordinary is the absence of pottery from the Jericho

villages until Level IX. Perhaps the people had such good substitutes in skin water-bottles and wooden cups and bowls that they did not feel an urgent need for pots.

It is strange that the villagers of Levels X and XI, though ignorant of pottery, used a paste of clay to model impressive human figures over a framework of reeds. Two groups have been found, each consisting of a life-size man, a half-size woman, and a doll-like child. These statues are naturally crude but have spirit and movement, and the modelling is surprisingly good. There are traces of red or brown paint on them, and the man's hair and beard are indicated by red lines. The staring eyes are sea-shells carefully inserted from the back of the head. One set of statues was found in the inner room of a large house, and if they were cult objects it seems that the worship of the divine family began here hundreds of years before we know of it elsewhere (Fig. 15, *f*).

The Jerichoans also used clay for plastering the walls of their houses and for lining their corn-bins hollowed out of the ground (Fig. 15, *k*). Garstang would start the evolution of pottery from these bins, which later were raised above the surface by clay rims or walls. Père Vincent, however, does not think that they had any connection with pottery-making. The first pots suddenly appear in Level IX, and though of poor quality they were by no means primitive types made by people in the experimental stage (Fig. 15, *a*). The earliest were plain burnished, but soon some were coated with a cream slip on which chevrons and bands were painted and burnished (Fig. 15, *b*). It is a mystery why these folk adopted pottery at last, for the rest of their culture shows little change and no sign of invaders.

They took considerable care in erecting their houses, though generally only slabs of mud were used for the walls, which, like the hard mud floors, were faced with lime. They were then painted with "bold splodges of dull red or brown" and actually polished with stones, some of which, tinged with red, still lie in the houses just as the busy housewives laid them down. Sometimes the main doorway was flanked by



FIG. 15—NEOLITHIC JERICHO

a, plain pottery; b, painted and incised sherds; c, flint sickle blade; d, arrow-heads; e, pick; f, knife; g, scraper; h, head of statue; i, clay-lined bins; j, model of shrine (?).

columns built of curved bricks with grooves on one surface for bonding. In Level XI stood a building with a portico resting on six wooden posts, an antechamber, and a large inner chamber with a central post to support the reed-covered roof—strangely like the Greek *megaron* described by Homer. This structure was so important that it was rebuilt seven times to Level X, and as no hearths or domestic articles were found in it, it is not likely to have been a house. Moreover, clay models of domestic animals, phalli, and small cones lay around it. These and the cluster of tiny rooms like pens in the forecourt suggest to the excavator that this was a farmer's sanctuary.

Stratum IX produced a delightful clay model of a beehive-hut or shrine, three and a half feet high, which was so fragile that half of it crumbled away as it was being excavated. It consisted of two stories; the upper had two windows and a pillar supporting the domed roof, while the ground floor was paved with stones and had a dummy door with a shaped stone to be rolled into the door-frame. It is curious that whereas all the houses are rectangular, this model is round. Can it possibly be a link between the beehive tholoi of Arpachiyah and the beehive tombs of Cyprus (Fig. 15, *l*)?

The flint industry of these people was a variety of a type common to Palestine in Chalcolithic times, known as Tahun II. Warfare was so little practised that there were no special weapons for it. With the exception of one javelin head, the only weapons discovered were twanged or leaf-shaped arrow-heads. Most of the flints were tools—scrapers, big knives, picks, borers, one celt partly polished, and more than 800 serrated sickle blades for insertion in handles (Fig. 15, *c-i*). In the last phase agriculture became even more important, and very large curved sickle-blades with toothed edges were used. Pits were then sunk in the house-floors for storing grain. People must have lived almost wholly on the produce of their farms, for there was little hunting and arrow-heads were few. The whole story of the excavations at Jericho is intensely interesting and thought-provoking.

Ghassul (Fig. 16).—There seems to be no end to the cultures



FIG. 16—THE ENIGMATICAL CULTURE OF GHASSUL

a, model house containing human bones, Khudeirah; *b*, a gable end; *c*, pottery found with models; *d*, *e*, mysterious painted symbols; *f*, part of the great star; *g*, figurines; *h*, mortars, *i*, saddle quern; *j*, *k*, painted and plain cornets; *l*, painted pots; *m*, cooking-pot.

yet to be discovered and to the surprises which await the archæologist. In most formidable desert, three and a half miles east of the Jordan, and four and a half miles north of the Dead Sea, there are a number of small low mounds covering an area of eight acres. The late Père Mallon, a distinguished Palestinian archæologist, picnicked here at El Ghassul in 1929 with some students, and was astonished to find the mounds littered with flints and potsherds. He returned to excavate, and in the course of many years unearthed a remarkable civilization. The mounds consist of four layers of ruined mud houses which, the excavator believed, date from 4000 to 3500 B.C. The culture was uninterrupted throughout, though a gradual development took place in everything except the pottery.

The latest houses were of a crude sun-dried brick or pisé on a foundation of small stones, and were probably built round courtyards. Each village was burnt out, and the quantity of charcoal suggests that the roofs were largely of wood. At first the pottery was fairly good, but it soon deteriorated, though a slow wheel was sometimes used. The commonest vessel was a conical cup like a straight horn, but there were also chalices of egg-cup shape and round jars with small lugs. Some vessels had simple bands and hatched triangles painted on them; others had finger- or nail-prints (Fig. 16, *j-l*).

Labour-saving was not considered, hard stone being used extensively for saddle querns, whorls, loom weights, and innumerable bowls. Implements of flaked flint or polished stone, but very few arrow-heads, were found; so the people depended on their stock for food. They wore woven clothes and much jewellery of semi-precious stones, bone, and mother-of-pearl—the "moon drops" of the Mother Goddess in later times. The cemetery of this sprawling village was not discovered, but several infant burials in pots or under sherds were found beneath the house-floors.

So far this description gives nothing startling or original, but it was the debris of the walls which provided the sensation. These walls were painted with the most astonishing and

fantastic patterns, some of which call forth a fellow-feeling in modern painters. In this agricultural village, slumbering in the enervating Jordan Valley, men were intently painting religious pictures or symbols with amazing skill and originality. All that remains of one naturalistic scene, covering thirteen square feet of wall, is a long ray, three pairs of human legs which are moving towards the legs of a great beast (an ox?). Behind this are two more pairs of legs, all painted in black and white, light and dark red, and yellow. This suggests a scene of worship such as was common in Egypt and Babylonia.

A totally different type of art is shown in the very lively and impressionist painting of a bird. The photograph appears to show that it was executed in dabs of different colour without an outline, and it is utterly unlike the usual smooth, flat, and stiff paintings of neighbouring peoples.

The symbols, in contrast, are painted in the neatest and most rigid style suitable for geometrical designs. The most important is a huge eight-rayed star. Another, very large and perfect, has a fascinating and complex design within the rays (Fig. 16, *f*). On the same wall are unfathomable cubist nightmares, among which appear twin eyes (like spectacles), reminding one of those so popular in Troy later and associated with the Mother Goddess as far as Denmark (Fig. 16, *d*). These paintings stand alone. The naturalistic cultus scene is in line with those of Egypt or Mesopotamia. The star recalls the Arpachiyah plates, but the impressionist and cubist efforts cannot be matched anywhere and are startling reminders that our smooth generalizations about ancient peoples may yet suffer some jolts.

As these paintings seem to have been on walls, one above the other (the cultus scene on the earliest), it may be that the building they adorned was a shrine. The only other site known on which house walls were decorated at an early date was Persepolis, about 4000 B.C.—hundreds of miles away in South Mesopotamia.

The Ghassulian culture, apart from the paintings, bears little relation to any other, though there are slight resemblances to

that of Ma'adi in Egypt. It is not like that which was prevalent in Palestine at the same time, the Tahunan. Ghassulian farming was based on irrigation, for though the district was more fertile then than now, the rainfall was insufficient for cultivation and water must have been brought from the numerous streams flowing from the eastern mountains—a feat which needed skill and organization. It seems likely, therefore, that the people came from a country where irrigation was practised.

At the time of the excavations Ghassulian culture was unique, but it has since been found frequently in Palestine from Khudeirah on the Plain of Sharon to Fars and Jericho in the south.

At Khudeirah Ghassulian sherds were found under a thick layer of rocks which had been formed later (*kurkân*), and they may belong to the first half of the fourth millennium B.C. With them, buried on the top of one another in the sand, were a number of lidless chests and model houses of poorly baked clay (Fig. 16, *a*). They were from eighteen to twenty inches long, and all, with one exception, contained human bones. Whether bodies had been buried until the flesh decayed or whether the bones had been artificially cleaned it is impossible to say. The models suggest houses of reeds tied together at the top to form an arched or pointed roof. One end wall is larger than the roof and has a large square opening—probably a door, but it is so high that a ladder would be needed to reach it. The other end wall is pierced by holes high in the gable, which appear to be too small for windows and may have been smoke-holes. The whole was mud-plastered and painted cream with brown bands and triangles. These house models recall those of early Central Europe, but in none of the latter have bones been found. Later urns were frequently made in house form. The Egyptians of the sixth to the twelfth dynasties (2500–2000 B.C.) put “soul houses,” model dwellings, on the grave for the spirit to inhabit.

There is still much dispute as to the period to which the Ghassulian culture belongs. Its art seems to be late, but in

Jericho it has been found just before the Bronze Age (3000 B.C.), and in Megiddo and several other sites it holds the same position.

The Megalithic dolmens and stone cists of Palestine and Transjordan are very numerous, but the meagre contents of the few which have been opened throw no light on their origin or date. The same uncertainty surrounds the paintings at Kilwai in Transjordan.

Alishar: Level O.—One of the disappointments of Near-Eastern archaeology is the lack of connections between Europe



FIG. 17—POSSIBLE LINKS WITH WESTERN COUNTRIES:
FROM ALISHAR

a, "fruit stand"; b, pattern burnished red ware; c, incised grey ware; d, painted sherd; e, wooden object; f, "Mother Goddess"; g, lead seal.

and Asia, though almost every excavation makes the derivation of European culture from the Near East clearer. The few sites which have been explored in Central Anatolia offer meagre links, and further excavation is a pressing need. No true Neolithic has yet been reported, and the earliest culture known is Chalcolithic, though it is much later than other Chalcolithic sites in the Near East. The earliest settlers at Alishar specialized in wood carving, and a great number of wooden implements have been discovered. The burnished black and grey pots were often treated like wooden vessels, with rectangular designs cut out of the clay in imitation of carving. Even the few roughly painted sherds had similar designs. The

houses were oval and had wooden pillars set in flat stones to support the roof.

This culture is unlike any other known. Alishar was cut off from the west by the salt desert of Central Anatolia and, the only way to Syria being a pass over the Taurus Mountains, it was remote from the cultures which spread so widely from Iran to Palestine. In Level I is the first metal—a fine lead seal with a cruciform design. Copper appears later in small quantities.

Many objects from this site, and from Alaca and Kum Tepe, are of great interest because they are so much like those found in Europe. Plain red ware like that of Cyprus and Syria replaced the early black pottery and was often burnished in lines to give a fluted effect. Pedestalled bowls, known as "fruit stands" (Fig. 17, *a*), and handled cups may be the prototypes of those found in Europe. Clay figures of the Mother Goddess may hint at two-way traffic with Cyprus (fiddle-shaped) and Greece (round body and pillar-like head). One, however, with a few marks to indicate the figure, is peculiar, and recalls the later Megalithic figurines of Spain. The lead seal seems to have been initiated in Greece and Central Europe (Fig. 17, *g*).

The Turkish Government is now encouraging excavation in Anatolia, and reports from new sites will be read with great interest.



CHAPTER IV

THE ISLAND CIVILIZATIONS

THIS brief survey has carried the story of man in the Middle East up to the time when the tempo of "progress" was enormously increased by the epoch-making discovery that metals could be smelted and cast into tools and weapons which were a hundred times more efficient than those of stone. Naturally smiths were the key men of the new world, and they guarded their secret formula jealously, handing it down from father to son. Weapons and tools made by them gave their lords and masters immense wealth and power, which stimulated their ambition and provided the means to satisfy it. So from 3500 to 3000 B.C. the centres of civilization in the Near East and Egypt developed from primitive, self-sufficient, Neolithic farming communities to strong and highly-organized Bronze Age States with a powerful ruling class, vast trade, and a complex and very dominating religious system. Luxurious palaces, great temples, almost modern cities, merchant navies, caravans, armies with chariots and hosts of civil officials

formed the basis of the Bronze Age life. Learned men made remarkable discoveries in mathematics, astronomy, building construction, and engineering; from simple signs elaborate forms of writing were developed; craftsmen artists produced the most beautiful and intricate metal-work, jewellery, fine stone carving, and every conceivable household and personal luxury.

Business was conducted on a large scale, usually by temple officials on behalf of the deity or semi-divine king, and also on their behalf prospectors were sent on arduous expeditions to remote countries to obtain precious stones, metals, and magical substances, such as gold, pearls, amber, incense, etc.

International problems and relations caused as much trouble then as now, and there was the same greedy nationalism and lust for power, often camouflaged under the cloak of the national deity. Regular trade routes were followed over every kind of difficult country. Neither deserts nor terrifying mountain ranges prevented travellers from reaching Baluchistan, Persia, India, and even China. Kings and nobles always liked to collect curiosities and would equip fleets and caravans to fetch dwarfs and strange animals and plants to give distinction to the gardens of their palaces. Along sea and land trade routes settlements formed and new centres of dispersion grew up.

It was a barbaric world where splendour and poverty, beauty and cruelty, went side by side; where brilliant discoveries received less respect than grossest superstitions; where elegance and ignorance throve together; where wise laws stood beside age-old traditions, and fine moral teaching and true piety made little impression on the priestly gospel of magic.

In such a world there were constant upheavals, outpourings of peoples seeking fresh land, and displacements of peoples by conquerors. Out of this melting-pot, which so often bubbled over, came Neolithic life to Europe—a Europe as much behind the civilized world of that day as Africa was behind Europe in Livingstone's time.

Cyprus.—Cyprus was well populated in the fourth millen-

nium, and this is not to be wondered at, for the island could be seen from the great Chalcolithic cities of South Anatolia. It might have been expected that immigrants would simply transfer their Anatolian heritage to their island home, but this did not happen. Here, as in so many other instances, a new culture developed, showing many analogies with the old but never becoming a mere copy, although there must have been constant intercourse with the mainland.

One of the earliest settlements was Khirokitia (4000-3500 B.C.) where, at first, pottery was unknown and spouted bowls and cups were laboriously hollowed out of river stones (Fig. 18, c). Basins were also scooped in the earth and lined with clay, as at Jericho. Later, red burnished pottery suddenly took the place of stoneware, as though new immigrants had conquered the island. Usually it was plain, but some was combed to give a streaky effect and others were incised or ornamented with knobs, as at Malta (Fig. 18, e, d).

Through the centre of the village runs a road of stones, and on each side of it, as close as houses in a slum, are the ruins of many round buildings (tholoi) similar to those of Arpachiyah, except that at Khirokitia the large ones were tombs. Each contained two or three skeletons with heavy stone querns on their heads or chests, and bowls, broken intentionally, near by. One body, buried beneath a stone platform and between two well-built stone piers, was violently distorted like the skeleton at Jericho.

The small tholoi are from 4 to 6 m. wide and probably had beehive superstructures of pisé or mud-plastered reeds, but the large ones were 10 m. wide with walls 2 m. thick. Enough of one remains to show that it was corbelled, the first corbelling known in the Mediterranean area. The large tholoi are surrounded by open spaces, which are enclosed by walls, and within the spaces are quantities of burnt bones around stone tables (Fig. 18, a, b).

In successive floors of one tholos were the skeletons of twenty-five infants, some lying on adults and some in stone-lined holes. On a lower floor is a "throne," a seat of river pebbles, and three



FIG. 18—NEOLITHIC LIFE IN CYPRUS AND CRETE

CYPRUS: *a*, tholoi crowding along a road; *b*, large tholos; *c*, stone cup; *d*, knobbed ware; *e*, combed ware; *f*, stone cone; *g*, model head; *h*, painted ware.

CRETE: *a, b*, squatting figurines; *c*, pottery trough or altar; *d*, cooking-pot and ladle; *f, g*, pottery handles; *h, i*, loom weights; *j*, spindle whorl; *k*, incised sherds of black pottery; *l*, stone axe.

small hearths, on one of which lay a skeleton. A model human head, apparently ornamented with snakes, was found on an upper floor.

Here lie the clues to the beliefs of the tholos builders, but who can interpret them? All we can say is that snakes were the emblem of the great Cretan goddess and in the Bronze Age Cyprus had a strong snake cult. It is curious that figurines of the goddess are not known until the Chalcolithic period. A carved lion or panther's head from Khirokitia may be a religious emblem, though it is usually described as part of a chief's sceptre.

These folk, with their dubious ritualistic customs, were peaceful farmers, using flint sickles and polished stone axes for their work, and hunting a little, though apparently without bows and arrows. They dressed in woven garments fastened with hammer-headed pins, and wore stone beads and pendants. The numerous skeletons discovered disclose interesting facts. The first settlers were of Mediterranean race, but they were soon followed by Armeniod people, who bound their children's heads to ensure distortion. Previous to this discovery the earliest evidence of this custom came from the end of the Bronze Age.

This primitive civilization seems to have been closely linked with the next, that of Erimi, a Chalcolithic culture with copper tools and red on white pottery (Fig. 18, *h*) bearing some slight resemblance to that of Thessaly. Life continued as in the earlier stage but was more varied. The cult of the Mother Goddess became important, and some fine, austere figurines were made, one of which wears a model of herself as a pendant.¹ This period is approximately dated 3500-3000 B.C.

Neolithic Crete.—The extremely interesting island of Crete received its earliest Neolithic populations from Asia Minor about 4000 B.C., and the depth of the strata shows that the period was very long. How we should like to find the boats in which those early seafarers braved the dangers of an

¹ Some beautiful examples are shown in the British Museum.

unknown and treacherous sea, the huts in which they lived, and figurines of the deities they worshipped. Alas, the only relics which have been discovered are coarse, plain pottery bowls, often burnished inside and out!

At length new peoples arrived with a much higher culture and a fine tradition of pottery-making. They brought black incised ware decorated with punctured ribbons and chevrons. As the incisions were filled with white, the effect was bright and sparkling. There was also a beautiful pattern-burnished ware with a rippled effect. Their houses were well stocked with a good variety of large open bowls, miniature cups, pedestalled goblets, ladles, and triangular partitioned trays—probably offering-tables. Many vessels had sharply carinated shoulders and wish-bone and tubular handles (Fig. 18, *g*). Clay spools and spindle whorls were incised with the same patterns as the pottery, and occasionally with birds and animals. The details of Cretan Neolithic culture are specially worth noting for the bearing they may have on the westward migrations of Mediterranean peoples.

These folk introduced a variety of figurines of the Mother Goddess, who was to play so great a part in Cretan life. Some are sitting or squatting fat figures, and some are flat and fiddle-shaped—prototypes of the later Cycladic idols (Fig. 18, *a, b*). Probably part of an offering left by worshippers at her shrine was a group of tiny vases, a plump figurine, a large piece of meteoric iron (magical), and sea shells. Another important Cretan symbol, the axe amulet, goes back to this remote age.

By Upper Neolithic times the people were living in solid houses, with the lower storeys of undressed limestone blocks. The upper storeys may have been of sun-dried bricks. Some houses consisted of one room only, but others had several small rooms irregularly planned.

The standard of pottery fell off, although kilns were used for the first time. Copper was introduced to a slight extent, and even copper axe-heads were made, but stone was still the chief material for tools and weapons.

It is fascinating to search for analogies with objects found in Neolithic Crete and to try to glimpse what lies behind the archæological comparisons. The closest connections were with Anatolia, but the figurines, axe amulets, mace heads, and much of the pottery, including the pedestalled bowls, were the common tradition of the Near East. Vinča (p. 76) also had punctured ribbon decoration, pedestalled bowls, and other pottery fashions, probably because they and the Neolithic Cretans inherited the same tradition. The plump stone axes and clay ladles might have come from Merimde, and it was with Egypt that most of the traffic was carried on, as far as is known. Crete later developed a distinguished civilization which was very different from any other of the Near East, and her people became great mariners. In many ways the Cretans seem to have more in common with ourselves than any other ancient people in their love of sport and the sea, their free and natural way of life, and they excelled us in their love of beautiful things and joyousness.

The Cyclades.—These barren little islands did not attract immigrants until about 3000 B.C. when they were colonized from Anatolia, probably because prospectors came seeking the rich store of metals and valuable stones—copper (Paros and Siphos), obsidian (Melos), marble in several islands, and emery (Naxos). This extensive trade may have attracted pirates, for many of the villages are fortified. The extent of the early maritime trade is proved by the discovery of a vase of Paros marble in a predynastic grave in Egypt. No wonder that ships were often drawn on Cycladic vases!

These tiny islands developed a distinctive culture which was carried abroad by the merchants and strongly influenced later peoples. Figures of the Asiatic Mother Goddess were sometimes austere and delicately carved in marble, but the type which spread so widely is a flat fiddle-shaped thing which would be unrecognizable if the intermediate stages were not known.

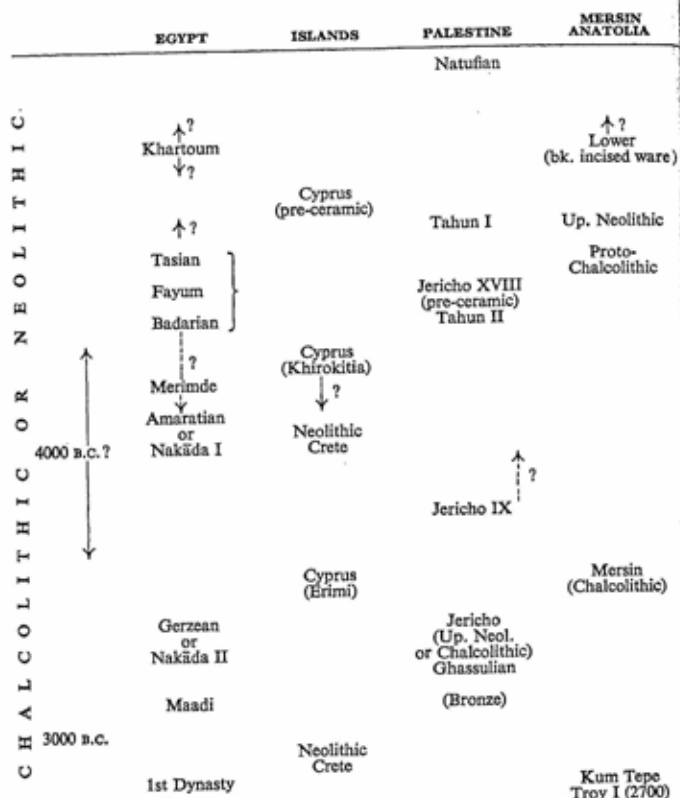
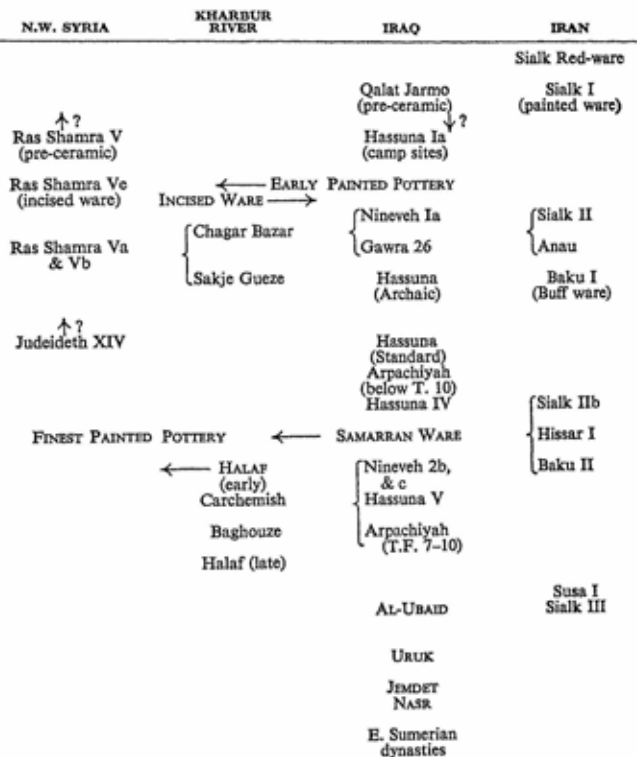


FIG. 19—CHART OF PREHISTORIC CULT

Figures = levels of excavation. Usually Level I = lowest level, but



URES OF THE NEAR EAST AND EGYPT

at Jericho, Judeideth, Gawra and Ras Shamra Level I is the highest.

	GREECE & MACEDONIA	MIDDLE DANUBE	BULGARIA	BLACK EARTH LANDS	W.C. EUROPE
3400	Pre-Thessalian	No	MESOLITHIC	CULTURES	
	Thessalian	MESOLITHIC			
3300	Thessalian				
	MACEDONIAN	Starčevo			
3200					
3100		Kőrös			
3000		VINČA	Boian A	Izvoare I	Danubian I
		Bükk			DANUBIAN I
2900					
2800	DIMINI	STARČEVO	BÜKK		
			BOIAN A		
2700	DUMNI-VARDAR-MORAVA	Vlača		IZVOARE	DANUBIAN II
2600		Butmir		Cucuteni I	RÖSSEN
		TISZA		ERŐSD	Lengyel
		Tordos			
2500	DUMINI			CUCUTENI I	
2400	TRANSITION TO METAL	BUTMIR	GUMELNIŢA	TRIPOLYE	LENGYEL
			TRANSITION TO METAL		SAXO- THURINGIAN
2300					
2200		TRANSITION TO METAL			TRANSITION TO METAL
2100				TRANSITION TO METAL	
2000					

FIG. 20—CHART OF
New chronology for Vinča and related cultures given in **bold type**. See *Annual*
those shown in this table.

S. RUSSIA &
CAUCASUS

IBERIA

FRANCE

SWITZER-
LANDBRITISH
ISLESDENMARK &
SCANDINAVIA

M E S O L I T H I C
C U L T U R E S

CAVE
CULTURES
EL GARCEL

ALMERIAN

BIZÉ I

E
R
T
E
B
Ø
L
L
E

DWELLING
PLACE
CULTURES

MAIKOP
(CAUCASUS)

MEGALITHIC
TOMBS

CHASSEY I
GALLERY
GRAVES

CORTAILLOD

NEOLITHIC
A

FIRST
NORTHERN

YAMNO
GRAVES

PORTUGUESE
TOMBS
BEAKERS

PASSAGE
GRAVES
CHASSEY II

MICHELS-
BERG

LONG
BARROWS

NEOLITHIC
B

AICHBÜHL

MEGALITHS
IN
SCOTLAND
&
IRELAND

DOLMENS

B
A
T
T
L
E
P
A
S
S
A
G
E
G
R
A
V
E
S

CATACOMBS

TRANSITION
TO
METAL

HÖRGEN

TRANSITION
TO
METAL

S.O.M.

TRANSITION
TO
METAL

CISTS
WARRIORS

CULTURES OF EUROPE

of the British School at Athens, 1949. Professor Childe's dates are lower than



Part II—Overland Migrations to Europe

CHAPTER V

THE ENTRY INTO EUROPE

NEOLITHIC culture reached Europe by four main routes: (1) an overland route from the south-east to and along the Danube and its tributaries; (2) a route along the North African coastal plains, probably from Egypt, to Spain and through France to England; (3) a maritime route from the Eastern Mediterranean through the straits of Gibraltar to western and northern Europe; (4) a continental route from South Russia by way of Poland to Central Europe and Germany. Eventually people who travelled along these several routes met, mingled, married, and fought, to the confusion of archæologists who try to disentangle movements and cultures and peoples whose existence is known only from fragments of pots, tools, weapons, and faint traces of their homes.

Obviously it is impossible to relate a straightforward story of the colonization of Europe, and no method can be wholly satisfactory. Here the four great migrations will be followed, but it must be remembered that this is a somewhat arbitrary arrangement of the subject for our convenience. Actually the process was like the flooding of the sands after children have dug channels there—the sea flows along them strongly, but also breaks down banks, forming connecting rivulets which become pools, until eventually the whole beach is covered.

Greece was the first European country to be colonized by Neolithic peoples; and this was natural in view of the early

maritime trade in the East Mediterranean. The first inhabitants were simple farmers, who probably came from or along the south coast of Anatolia before the foundation of Troy—about 3500 B.C., when the Bronze Age was dawning in the Near East. Whether land-hunger or disturbances in their homeland sent them across the island-dotted sea is not known. From the coastal inlets it was easy to reach the mountain-ringed plain of Thessaly, over which they spread until the way was barred by the great forests of Pindus, which then came down upon the plain (Fig. 22).

The villages, though in groups, did not possess any defences, and the farmers' only weapons were sling-stones. They laboriously tilled small plots with polished flint celts, shaped like shoe lasts or chisels, which they fastened to an elbow-bent branch (Fig. 21, *c, d*). Apparently they had some knowledge of manuring, as they lived long enough in one place for their superimposed villages to form tells or mounds. Barley was cultivated in the first period, and possibly wheat: figs, peas, almonds, and pears in the second period.

The houses recall those of the Near East centuries earlier, but they had peculiarities of their own. The substantial rectangular houses of Tsangli had stout walls of mud brick resting on foundations of stones laid in clay or mud. The roofs were supported by large internal buttresses which formed cubicles (Fig. 21, *a*). Perhaps a small platform of light poles covered with clay was a bed that could be made comfortable with a layer of straw, bracken, or skins. At the type site, Sesklo, rectangular wattle-and-daub huts had sloping roofs and gables, while close by on the hillsides were round huts of intertwined branches with beaten clay floors, exactly like those made by Greek shepherds today.

The people's possessions were few and simple—bone and horn needles to sew their woven and skin garments, bone pins and stone buttons to fasten them, and for ornaments stone bracelets, bead and spondylus shell necklaces. These shells were so "lucky" or protective that they were later carried right across Europe. The tools of those early colonists were



FIG. 21—THE HANDIWORK OF THE FIRST EUROPEAN FARMERS

b-d, stone axes and adzes; e, sickle flint; f, mortar and pestle; g, quern; h, button seal; i, pottery "offering table"; l-p, x, figurines; s, waisted pebble; t, spindle whorl.

merely flint and obsidian knives, bone-scrappers, and hammers of deerhorn.

Perhaps their greatest treasures were their gay and original pots. The best were the earliest, for, as memories of the homeland faded, the potters' skill declined. Although baked only in an open fire, much of the pottery reached a high standard and was carefully and beautifully burnished. The finest ware was coated with a white slip of liquid clay on which vigorous designs of curving spikes, steps, checks, or zigzags were painted in red to imitate basketry or textiles. A new technique had been invented. After the whole pot had been covered with red paint the design was produced by scraping off the red to show the buff or cream surface underneath—scraper board technique some 5,000 years ago! Incised ware was not popular and is found only in the north, where wedge-shaped or round incisions alternated with painted bands.

The commonest pot was a shallow all-purpose bowl with a flat base, but later shallow bowls were mounted on high stands ("fruit stands") as in Alisar (Fig. 17, *a*). Groups of villages adhered as firmly to their traditional patterns as Wedgwood or Crown Derby potters, though pots were often exchanged.

The Mother Goddess accompanied the settlers from the Near East, and over two hundred of her images have been found. Some are so crude as to be scarcely recognizable, but others are fairly well modelled. No type became dominant; there were standing, sitting, and squatting figures, and some squatting on a stool (Fig. 21, *l, m, o, p*). Various experiments were made with heads, which range from pinched-up lumps of clay to heads with curled and parted hair and two rolls of clay for eyelids. A few male figures are known: one wears a square cap (chapter heading) and others have incisions which suggest beards (Fig. 21, *n*). There are also a few fragments of animal figures. Again the earliest were the best. Probably other "cult" objects are small pottery tables or "altars" (Fig. 21, *i*) which, from Asian and Egyptian analogies, may have been for food offerings or incense to the dead or a deity.

These folk seem to have lived very isolated lives, for the only

sign of contact with the outside world is obsidian from the Cycladic island of Melos, which was the only source of this greatly prized volcanic glass (used for tool making) in the East Mediterranean.

From such a lowly culture it is not easy to detect signs of its origin, but the pottery (in some respects), the bricks, and stamp seals with cruciform designs (Fig. 21, *h*) point to Anatolia or North Syria.

Macedonia.—After a considerable time some urge sent the Thessalians north into Macedonia, where their best-known site is Serbia. There they developed a kindred culture with "scraped," incised, and painted pottery (Fig. 21, *w, v, q*); but the incised ware was coarse with somewhat aimless dashes and pin-pricks. The tools and ornaments were also like those of Thessaly, with the exception of "waisted" pebbles, which may have been mounted and used as hammers or axes (Fig. 21, *s*).

As in Thessaly, generations of peaceful farming communities remained undisturbed for a long time, and then a more warlike Neolithic people suddenly swooped down on them, destroying their villages and frequently building fortified ones on the ruins. The invaders did not penetrate everywhere, and in the western areas the development of the older culture went on undisturbed.

The date of this invasion and the direction from which it came are such controversial points that without further knowledge of the Neolithic advance into Europe it is impossible to judge the value of opposing theories, and so this subject will be reopened later (p. 110).

Vinča.¹—Probably the earliest and certainly the most important Central European site is that of Vinča on the loess bank of the Danube near Belgrade. Why the first people ever made the long, hazardous, and difficult journey to Vinča is a puzzling

¹ A new assessment and dating of the Vinča and Starčevo cultures by V. Milojević appeared in the *Annual* of the British School of Athens 1949. The early strata at Vinča, up to 9.5 m., belonged to the Starčevo culture and all true Vinča culture appears later. See alterations in the table of European cultures for dates. This new reconstruction makes the prehistory of the Balkans and Danube basin much more comprehensible.



FIG. 22—POSSIBLE RIVER VALLEY ROUTES TO AND FROM THE DANUBE

S, Serbia; O, Olynthus; R, Rakhmani.

question (Map; Fig. 22). Farmers might surely have found sufficient agricultural land nearer home, and if prospectors led expeditions in search of the metals so richly stored among the mountains, who gave the clue to their existence there? There is no easy and obvious way through the maze of mountains surrounding the Middle Danube Basin. Each route is difficult, and none shows clear indications of the passing of Neolithic peoples. The Danube is the great natural highway into Europe, and its lower accessible reaches pass through open country. At the Iron Gates it becomes an impassable barrier for nearly 100 miles, and it was not conquered until the Romans cut a road in the cliff-face of the mountain that drops sheer to the rapids and whirlpools of the foaming river. No Neolithic sites have been found along this stretch, but there are several to the east of it within the sharp bend of the river. Throughout the North Balkan area valleys thread their way among a tangle of heavily-wooded mountains, and feasible passes lead from one river system to another.

The most famous route from the *Ægean* Sea to the Danube is up the Vardar Valley over an easy pass into that of the Morava; and some archaeologists think this is the way the Neolithic peoples travelled. Unfortunately no Neolithic sites or objects have been found between the Yugo-Slav border and Pavlovce on the Upper Morava, except for a doubtful find near Skoplje. The numerous villages lower down the Morava and on its tributaries seem to have been founded in later Vinča times.

Fewkes believes that the Struma Valley was the more likely route. The head-waters connect with the Sofia basin and the valley of the Upper Nisavo, and so on to the Morava Valley. None of these routes was tempting or obvious. Such unforeseen difficulties as swamps in the Vardar Valley and gorges in the Morava would need circumventing, and in such broken and densely forested country that would mean difficult exploration. Only a hardy folk with a powerful urge to explore would have persisted in such a hazardous enterprise long enough to reach the Danube Valley, which must have seemed an Eldorado to them. Vinča was chosen, perhaps, because it was near a

cinnabar deposit. Did those pioneers use the vermilion-coloured rock for paint? Or did they actually smelt mercury from it? If they knew mercury, they were probably prospector-explorers sent out by some oriental potentate. It is said that kilns for roasting cinnabar were found at 9 m., and certainly pieces of cinnabar were in the lower levels.

Whether or not there was a trade in mercury and red paint, people at once cleared the ground for their little fields and tilled them laboriously by hand with celts shaped like shoe-lasts (Fig. 23, *j*). Over the long trail they had managed to drive domestic animals, and so by hunting a little with bows and arrows and fishing in the great river they lived well and prospered. They continued here for so many centuries that the debris of their villages made a mound 10.5 m. (thirty-one feet) high. As there is no sterile layer throughout, the site must have been occupied continuously until the Bronze Age. The development of the culture was so gradual and uninterrupted that it is difficult to classify it into periods.

The most decided change was in the type of dwelling. Below 9 m. there were oval or round huts which were half sunk in the löess, but after 9 m. rectangular houses of wattle and daub were built above ground. It is difficult to obtain precise information about the site. One would like to know exactly the kind of culture the first explorers brought with them, so that an attempt could be made to discover their original home. Probably from time to time new waves of immigrants arrived who had made contact with people already colonizing adjacent areas of Europe. When the mound was 2 or 2½ m. high several new elements appear which indicate such fresh arrivals. One remarkable fact stands out: the Middle Danube basin was an empty land and Neolithic adventurers had nothing either to fear or gain from native tribes.

The early people who lived in wattle-and-plaster huts half sunk in the ground already understood the art of making several kinds of pottery, the favourite being barbotine ware. Usually potters aimed at producing a smooth shining surface, but these pots were deliberately roughened to give a lumpy or



streaky effect. The surface was coated with a clay paste and then pinched or dimpled with a finger or a small tool. Later globular jars and bowls were coated with a red slip and decorated with linear designs in brown or white. Later still polychrome ware became fashionable and the designs changed to scrolls.

The Mother Goddess survived the long journey, though only a few early figurines have been found. They have slanting eyes, hooked noses, long hair indicated by scratches, long necks and stethophagus figures. They are curiously unlike later idols at Vinča and should betray the origin of their devotees.

By the time the people were living on a mound nine and three-quarter feet high practically all the characteristics of Vinča culture had developed. Houses were substantial structures with floors and wattle walls thickly coated with clay paste, which possibly was fired to harden it. Large quantities of this plaster were found at all levels on all the sites, with clear impressions of logs and wattle work. Both houses and pit-huts were well warmed with large conical ovens.

Of the furnishing the pottery alone remains to tell of the skill and taste of the inhabitants, and it is astonishingly varied. Besides stroke-burnished (Fig. 23, *l*) and incised ware, there was much more "crusted" ware (paint applied after firing). Frequently the potters ran their fingers down the damp clay to make flutings with ribs between (Fig. 23, *t*). The numerous pedestal bowls (Fig. 23, *q*) had their stands painted red, and painting of spirals in black or white on a red ground was popular. There was pottery suitable for every occasion, from coarse kitchen ware to fine "table" vessels. In this isolated spot the bowls had a peculiarity which they shared with those

FIG. 23—THE ARTS AND CRAFTS OF THE
VINČA PIONEERS

a-e, figurines; *c*, clothed and with holes in arms; *f-g*, cat- or owl-faced lids; *h*, *i*, bone harpoon and spatula; *j*, shoe-last celt; *m*, *o*, *p*, *s*, ribbed pottery; *l*, *n*, stroke-burnished pottery; *r*, *w*, *x*, incised ware; *y*, tubular handles; *z*, pottery spike; *za*, amulet; *zc*, altar or libation table on legs.

of several distant lands: the wall was thickened on the carinated shoulder (Fig. 23, o, p). Curious pottery articles, known as "warming-pans," were found full of ashes. It is suggested that ovens, not beds, were warmed with them. Miniature vases, which were probably for cosmetics, were common at all sites.

The later figurines are more stylized than the earlier ones. Some crude little figurines had curious holes in stump arms (Fig. 23, c). It is fascinating to handle these clay figures and see how deftly and quickly the modeller had pinched up the nose and smoothed down the body. Her small finger-impressions are still quite clear.

The Vinča women had imagination and maybe a sense of humour, for they modelled some pots into the shape of fantastic birds or animals and stuck modelled animals or human figures on rims and lugs, or modelled figures in relief on the sides of their pots. Lids they turned into cat or owl faces (Fig. 23, f, g). These are extremely interesting, for they surely indicate contact with Troy or other towns where such figures were commonly made. It is well to remember that to these women such figures may have had a serious magical significance.

These folk lived unmolested in unfortified villages and had few weapons, for only a couple of marble maces and some flint arrow-heads have been found. They used flint for tools, and at the thirteen-feet level had obsidian and, a little later, bored jadeite axes. They fished with harpoons in the majestic Danube and its tributaries.

Unfortunately it is not possible to visualize these interesting people, for, though skulls have been found, no report has been issued on them. They dressed in woven garments fastened with bone pins and marble buttons, and they wore amulets of alabaster and marble, some being shaped like axes or heads. Excavators were surprised to find fayence beads in early levels. Surely these were brought from the outside by prospectors or merchants. Everyone wore marble, bead, and spondylus shell necklaces, marble and shell bracelets, and a few lucky women treasured copper beads.

The cult of the Mother Goddess played a large part in their lives, and the crude figurines became more sophisticated as the centuries went by. No explanation has been found for the holes piercing the arm-stumps, heads, and bodies of the earlier figurines. Some models were seated, a few held babies, and some wore masks and ox horns. The cow was often associated with the Mother Goddess in the Near East. So numerous are the figurines that probably each family or even individual had one. Even in Palæolithic times in Russia each family probably owned a similar figure. Among early peoples the Mother Goddess seems to have been a domesticated deity, as much at home in a peasant's hut as in an ornate temple. The shallow bowls on stands, called "libation tables" (Fig. 23, *zc*), the "altars" on short legs, and the bird-shaped *rythons* may have been ritual objects used in her cult.

Usually the dead were buried in contracted positions in graves, but Vassits reports a most interesting discovery of a collective burial of nine people in a tholos-like tomb with a dromos or passage entrance.¹ Such tombs are characteristic of the Ægean aristocracy.

Analogies with the Near East are numerous and include tells or mounds of superimposed villages, clay stamp seals, sickle teeth, fayence beads, head-shaped lids, figurines, pedestalled bowls, and most types of pottery. There is close agreement with the forms, decoration, and technique of Alişar in West Anatolia. Most of these resemblances, however, can be found in a lesser degree in Crete and in a greater degree in Greece. Evidently there were many outpourings of peoples from the Near East who shared a common basic culture. Primitive peasants moved then, as now, tentatively, without a definite destination, halting for long periods, mixing with other peoples, and picking up a few new ideas, but certainly not travelling or exploring for its own sake. The first immigrants into Europe drifted into an unknown world without guidance or charts.²

As time went on Vinča families moved off to fresh ground,

¹ This tomb belonged to the Starčevo people.

² Starčevo sites were scattered throughout Serbia down to Pavlovci.

and villages grew up along the Morava River and its tributaries, down the Timok Valley, along the Danube, and up the Tiza and Maros Valleys, where gold and copper were plentiful (Fig. 22). Early colonists crossed the Danube to Starčevo, opposite Vinča. There the earliest pottery was barbotine or plain burnished ware. This was followed by painting in criss-cross, chevron, or spiral patterns, usually on pedestalled bowls. Some of this ware is very like that of Dimini and Sesklo in Greece (Figs. 21 and 31). Tordos, a gold centre on the Marcos, had an early culture very similar to the lower levels of Vinča, with many figurines (Fig. 24).

It seems remarkable that though the people settled in metalliferous districts, yet very little copper and no gold have been found in their villages. Probably they knew the value of the ores, but had lost the skill to use them; for highly skilled occupations were always the first to be lost when time and distance separated people from their homeland. Smiths closely guarded their craft's secrets and handed them down to their sons. Moreover, appliances for metal-working were not easy to carry hundreds of miles over seas and mountains.

So we see the generations of Vinča people able to make good in a new and empty country, and there to develop their peculiar culture and become the centre from which groups of colonists went out to "civilize" Central Europe.

Boian A Culture (Fig. 24).—In spite of the mountain massif which barred the way, people eventually penetrated into the Wallachian Plain—probably soon after the first settlement at Vinča. Thence they spread up the Alt Valley to Transylvania and south to the headwaters of the Maritza in Bulgaria. They lived in cabins of split tree-trunks, with central hearths and shallow porches, and stayed long enough in one spot for their village to form mounds. They were so attached to their carved wooden vessels that they copied them in pottery; but the tradition of fluted, crusted, and white-lined incised pottery was carried on.

A few copper ornaments were made, and spondylus shells were treasured, but no figurines of the Mother Goddess have



FIG. 24—TORDOS AND BOIAN A CULTURES

TORDOS: *a*, incised figurines and trough; *b*, bone comb; *c*, loom weights; *d*, *g*, bone pendant and spoon; *e*, model house; *f*, cell; *h*, *i*, incised and painted sherds.

BOIAN A: *j*, "chip-carving" pottery; *k*, peg-footed bowl.

been found. Perhaps these were carved in wood and have perished, for in the contemporary cultures at Vinča and Körös they are known, and the Boian A folk made triangular clay altars.

Izvoare Culture.—How early the rich Black Earth lands of the Ukraine and South Russia were occupied by farmers is uncertain, but recently another simple peasant culture has been found at Izvoare in Central Moldavia, and a similar culture seems to have stretched right across the Black Earth lands before the coming of the painted pottery people. The monochrome pottery was incised, and the incisions were filled with white, or it was decorated with lines impressed with a tooth comb. A few small objects of copper have been found and figures of the Mother Goddess. Although Anatolia was so near, the people seem to have come from the Vinča-Körös region.



CHAPTER VI

THE PENETRATION INTO EUROPE

To follow the Neolithic trek westward it is necessary to go back to about 3000 B.C. when, perhaps, not long after the foundation of Vinča, the Moravian Plain became the focus of a related but poorer culture. From its diffusion along the Danube this is known as Danube I.

It is so easy in text-book fashion to describe one culture after another without stopping to consider why they differed or, indeed, why they were there at all. The very fact that from Galicia to Belgium, from Hungary to Germany, Danubian I culture was amazingly homogeneous startles us into inquiring as to the cause of this uniformity: whether it was due to the spread of a single Neolithic race so cut off from the outside world that it received little stimulus to progress or variation, or whether it was the culture only that spread among food-gathering Mesolithic tribes already in the region. Possibly both these factors were at work at different times.

The Danubians had the basic elements of the Vinča culture, but so had the Painted Pottery folk of Erösd (p. 102). If both were offshoots from Vinča, why did they differ so fundamentally? Did the Danubians absorb the mentality of the Mesolithic hunters, or did they merely degenerate as they drifted farther from the higher centres of culture? The latter is the more probable explanation, for these peasants were essentially farmers, and there is little sign of the Mesolithic love of hunting.

Until recently no Neolithic sites were known between Vinča and Moravia, but several have been found on the loess west of the Danube between Belgrade and Buda-Pesth. In Neolithic times that long stretch of the river flowed through marshes which extended far to the East and up to the loess ridge on the West; but beyond Buda-Pesth the loess touches the river again, and there are many settlements.

The Danube forms a wonderful highway three-quarters of the way across the Continent (except for the block at the Iron Gates), and near its source routes open up to the Rhine Valley and France, while its tributaries drain most of the best farming country in Europe and many of the richest metal-bearing areas.

The first Danubians seem to have had no knowledge of metals and were concerned with trade only in so far as it brought them the precious spondylus shells from the Mediterranean. Light porous soil and thinly wooded land were all they cared for, and in Moravia they found so much that they settled there in considerable numbers. Later they slowly spread along the Danube up the March to Silesia, and through the Moravian Gap to Galicia, and also into Saxony and Bohemia. At last they crossed even the richly wooded highlands beyond the Danube's source and reached the Rhine Valley, up which they travelled to found the well-known site of Köln Lindenthal and to settle on the Main and the Neckar. They even probed the Belfort Gap to France, and eventually reached Holland and Belgium with their culture little changed, having travelled 1,000 miles in (roughly) 500 years.

It is well worth while to ponder over a large-scale physical map and to think out what this tremendous journey meant in the way of difficulties and dangers from forest and marsh, floods and torrents, mountains and gorges, wild animals and the wet "Atlantic" weather, and to remember that at every stage new clearings had to be made and houses built with the most meagre equipment.

It is impossible in this small book to describe all the various settlements, but, in spite of considerable differences in detail and richness, they had so much in common that a few sentences

can give the essentials of all. The method of farming was similar to that of many African tribes. The Danubians cut down the trees, burned the undergrowth, and tilled the soil with stone hoes shaped like shoe lasts and mounted on a bent haft (Fig. 25, *j*). After a few years the crops became so miserable that the farmers had to clear and sow adjoining plots, for they had no idea of manuring. Consequently, in the lifetime of one man several moves were made, and his children as they married created little fields of their own several times over, until quite a large area had been impoverished by a single family group in one generation.

These were simple peaceful folk, and their only weapons were a few disc-like mace-heads. Nor were they fishers or hunters, and only with late Rhenish groups of mixed origin have arrows been found. Few cattle, sheep, goats, and pigs were kept, the people's diet being chiefly vegetarian.

Their homes were peculiar, irregularly-shaped pit dwellings with probably wattle and daub superstructures, and so large that they must have housed family groups. The floor was scooped out into an amazing series of large and small hollows of varying depths, and some of the ridges between may have served as seats. Some of the deeper hollows contained the ashes of hearths, while others were full of refuse. How the inhabitants moved about in the dim light without continually falling into them is a mystery (Fig. 27, *a, b*).

Cooking was done in domed ovens coated with clay. In wet and cold winters such dwellings would certainly be warm but little conducive to good health or a high standard of life; and it is not surprising to learn that spindle whorls have very rarely been found. Clothes must have been of skin.

There were no signs of chiefs, and very little of religion, artistic sense, or good craftsmanship. Figurines occur rarely and only in the south-east; but the remarkable fact that these folk carried spondylus shells everywhere suggests that they must have associated them with some power for good. Few burials have been discovered, most of the bodies were flexed in graves with a few offerings, and in Worms and

Moravia with red ochre in the graves. Later cremation became customary, and the ashes were buried with a few funerary gifts in the floors of huts. Babies were buried within the house—an old and widespread custom in the Near East. So few cemeteries have been discovered that some excavators think

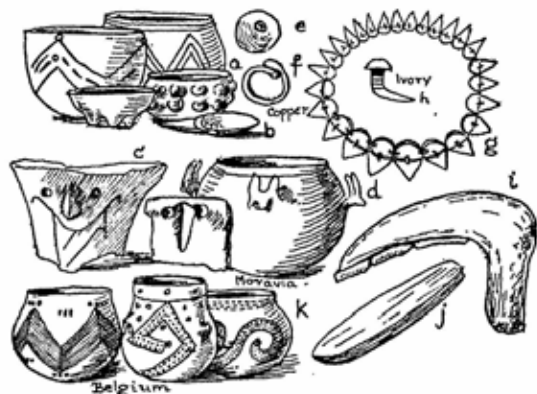


FIG. 25—DANUBIAN I POTTERY, JEWELLERY, AND IMPLEMENTS.

a, plain, linear, and knobbed ware; *b*, pottery spoon; *e*, *f*, rare spindle whorl and copper ring; *g*, necklace of carved pebbles; *i*, sickle with flint teeth; *j*, shoe-last celt.

cremation was more common than has been generally supposed.

The women made simple but distinctive vessels shaped like gourds, and as gourds grow only south of the Danube it is likely that these people were making substitutes for the gourds which their ancestors used in the homeland. Besides these bottles, round bowls, like the lower part of a gourd, were very common. Both types were often provided with lugs for threading with rope or hide, and some lugs were ornamented with

human or animals' heads as at Vinča. Burnishing and the use of slip (a coating of liquid clay) were refinements unknown to the women potters, who decorated their wares with incised ribbons curved into spiral or meander and zigzag patterns. This curious ribbon motive is an unusually abstract one for primitive people, who generally base the decoration of their pottery on that of another craft, such as basketry or leather work.

It is interesting to study photographs of the vases in order to see how unskilled and careless some of the women were. They pressed unevenly and too heavily on their tools, and so cut deep but uncertain lines in the clay. These rarely ran parallel, nor did they keep the correct curve for long. It is not easy to draw an S-shaped curve on a rounded surface. Some Danubian bowls were ornamented with small nipples of clay. All were baked in open fires of damp smoky wood, which left them a slate-grey or blotched and mud-coloured.

Probably the personal belongings of these folk were more numerous and varied than appears from excavations, for few graves have been found, and in abandoned huts only lost articles and rubbish would be left.

Their jewellery was chiefly of shells—spondylus shells obtained by barter, or local shells, or even fossil shells. These were often linked with perforated teeth or pieces of horn. In the Rhine Valley really beautiful necklaces were made of carefully shaped and graded pebbles with scratches on them (Fig. 25, g). The best, with graduated semi-circular and triangular stones strung together, look like modern necklaces. Slate and marble bracelets were worn, and in some areas pottery pendants. The Rössen folk seem to have adopted Mesolithic ornaments, for they liked bracelets of stag's antler, buttons carved from boars' tusks, and necklaces of stags' teeth.

So few skeletons of the Danubians are available for study that it is not possible to dogmatize about their racial types; but it is clear that they were chiefly a Mediterranean race, small, with long heads and short and rather narrow faces. As they advanced across Europe, meeting and marrying other peoples, naturally they varied, but still the basic type remained dominant.



CHAPTER VII

DANUBIAN OUTPOSTS

Bükk Culture.—On the course up the Danube from Vinča the first löess ridges lie on the east bank near the Bükk Mountains, and there, in caves previously inhabited by Mesolithic hunters, and in village sites in North-East Hungary, a charming and fine black, burnished pottery is found. It is decorated with curving bands of finely incised lines very close together forming volutes, arches, and zigzags (Fig. 26, *d*). These designs were often filled with red or white paint, and later the pots were sometimes painted with bands of these colours. The beauty, variety, and skilled workmanship are a great contrast to the simple uninspired ornamentation of Danubian I pottery, yet the people who made this distinctive ware seem to have been an offshoot of the Danubians who turned east and mingled with Mesolithic peoples from whom they adopted hunting, fishing with hook and net, and the use of antler axes. For hoeing their plots they still used shoe-last celts. There are signs, however, of contact with more advanced people in their painting, tubular spouts, pedestalled bowls, and models of human legs. Probably here as elsewhere the mingling of peoples resulted in a distinctive culture, which, though it did not spread far, influenced people beyond its borders and the tradition of later times.

Danube II Expansion.—The first wave of Neolithic peasants across Europe seems to have flowed steadily forward without



FIG. 26—DANUBIAN II POTTERY AND ORNAMENTS
l, model house; *m*, figurines.

clashes or serious interference from Mesolithic natives and to have covered the löess lands with a singularly uniform culture; but after two or three hundred years new elements crept in. They reveal themselves not only in new cultures but also in disturbances among peasant communities and in a general ferment, so that the simple culture pattern is broken up into new groups and the movements of people are most difficult to trace and to date.

From the Caucasus to Germany new cultures were supplanting or mingling with the old, or possibly evolving from it as the result of the infiltration of Ægean or Anatolian travellers and settlers. All the evidence suggests that there was also much intermixture between Danubians and Mesolithic hunters, and that a new race or races were sweeping in from the steppes, bringing war and disintegration but also vigour and a broadening of contacts. As the comparative dating is uncertain, it is impossible to define the influence of the one on the other with certainty, though sufficient agreement has been reached to allow a rough picture to be drawn of Europe in the days of its growing pains. Several distinct cultural zones were established, but how far they tallied with racial groupings is unknown.

In this small book it is possible to glimpse only a few of these emerging groups, and if such glimpses show nothing but changes in the fashions of pottery, a few more ornaments or different weapons, it is wise to remember that these are precious relics without which we should know nothing of the prospectors who made such adventurous journeys, of the patient farmers who sought new fields and so discovered Europe, of the women who gazed wide-eyed at a traveller's gay cup and became dissatisfied with their own, of the children minding the flocks on the high mountains or helping to wash gold from the rivers, of the stirring and incredible tales of the mighty cities told in the log cabins, of the wondering thoughts of men about the power beyond themselves and the ways in which they could get into touch with it. All the varied life of many tribes and many travellers lies behind the potsherds and

stones, axes, clay figurines, shell and tooth jewellery, which now rest on the shelves of our museums.

Stroke-Ware Peoples.—Somewhere between 2500 and 2200 B.C. a new wave of culture spread over the Danubian world from a centre which Childe locates in Bohemia. Its chief characteristic is a totally different kind of pottery, with shapes no longer founded on gourds but on varied and carinated forms, recalling leather vessels (Fig. 26, *a*). Incised curving ribbons are never found; instead there are straight bands in criss-cross patterns made by a series of stabs with a sharp tool, giving a jagged dotted furrow. This is known as "Stab-and-Drag" technique. These patterns look like string impressions, and the whole design like a string carrying-cradle for the pot. In some cases the stabbed work was painted after the pot was fired. As the culture spread farther afield to Moravia, Bavaria, and North-East Germany the designs became less realistic.

This culture, or folk-wave, followed the Danubian I people's track, but did not extend so far. In some cases stroke ware and spiral-incised pots were found together, as though the potters intermarried or lived side by side; but the newcomers were hunters as well as farmers, and their transverse arrow-heads and leather-type pots with string cradle patterns point to a strong admixture of Mesolithic peoples, if not to the adoption of Danubian culture by Mesolithic tribes. Certainly these folk were more warlike and virile than the first simple peasants, who by this time were settling in groups on the Neckar and the Maine and in Alsace, having traversed half of Europe with their culture little altered, though rather poorer.

Rössen.—Another warlike group of people, known as the Rössen folk, appeared in Central Germany about 2500 B.C. They spread over south and west Germany and among the Rhenish highlands, swooping down between quiet Danubian I settlements in order to build their fortified villages on defensible hill-tops. They had many weapons: transverse and hollow-based arrow-heads, disc-shaped maces, and antler axes. Hunting and stock-rearing were as important to them as

agriculture, which they carried on in the wasteful Danubian manner. It is possible that these people also were Mesolithic tribes who had adopted Neolithic ways from their distant connections (?), the stroke-ware people.

At their fortified village of Goldberg (Württemberg) they built strong gable-roofed houses of split logs with thatched roofs (chapter heading). These extended over one long wall to a row of posts, thus forming a veranda—perhaps to shelter cattle. Such houses were as snug and warm as a Canadian log cabin, and the barns were as well made. Some folk, however, lived in roughly rectangular pit dwellings, with floors hollowed out at different levels and with a deeply sunk hearth at the lowest level. It is suggested that they were covered with a beehive superstructure of poles tied together at the top and covered with wattle and hides (chapter heading).

Rössen pottery is strong and vivid, and looks like the work of an alert and vigorous people. The potters imitated the contrasting light and dark patterns of plaited baskets. To obtain this effect they stabbed furrowed lines deeply and filled the holes with white. This made sparkling starry patterns of chevrons, horizontal bands, or fillets against the dark walls of the deep bowls and shouldered jars (Fig. 26, c).

For ornaments these hunting tribes wore stags' teeth and buttons carved out of boars' teeth or marble, and bracelets of the ever-precious spondylus shell and of marble. Their dead were buried in contracted posture in trench graves. They had no female figurines, and there is nothing to indicate their religious beliefs.

Köln-Lindenthal.—One of the best excavated sites in Europe is that of Lindenthal, near Cologne, where successive generations of Danubian farmers lived for perhaps 400 to 500 years, and during that time hardly changed their ways at all. Four periods can be recognized, starting about 2700 B.C. In Period I the people either built fine barns and a few huts to live in at harvest time, but otherwise remained in their old village, as in South Europe today, or a small group permanently inhabited the spot. Certainly there were more granaries than houses.

In Period II stroke-ware people took over the site, which was a valuable one on cross-ways from north and south and over the Rhine. After a long time they also deserted it. In Period III a stroke-ware tribe built a new and small village which was destroyed by fire not long afterwards.

In Period IV a large group of newcomers built the largest village of all, with a ditch and palisaded bank all round. A ditch running across the centre of the compound divided the inhabited area from the cattle kraal. There was still no village plan, houses, storage-pits, and trenches being scattered about indiscriminately.

The large granaries—some 100 feet long—were outside the stockade and quite unprotected (Fig. 27, c). Being the most important things in the farmers' lives, they were much finer than the huts and were probably erected first. Each family raised their barn well above the damp ground on poles, and built it of strong logs with a thatched roof, airy and dry, with a log platform in front for drying the grain.

The first Lindenthal folk made the same kind of barns as the last, so the tradition must have been old when the people arrived; it was also widespread, for traces of such barns have been found in other Danubian areas.

Hoeing was done with a hafted shoe-last celt, but some late celts are so large that they may have been ploughshares—probably drawn by human tractors. The harvest was reaped with saw-edged flints, and the corn was ground on saddle-querns.

Corn and other produce were stored in thatch-covered pits and trenches near the sunken wattle huts. Similar huts and storage pits with good roofs were used in Hungary, Roumania, and the Balkans before the war of 1914–1918 and are well described and illustrated in *Antiquity*, March, 1936. Some storage pits were entered through a tiny door at the gable end, and others through a hole in the roof covered by boards.

The last and largest Lindenthal village contained from thirty to thirty-five houses, which probably indicates a population between 200 and 300. Such a community must have had some

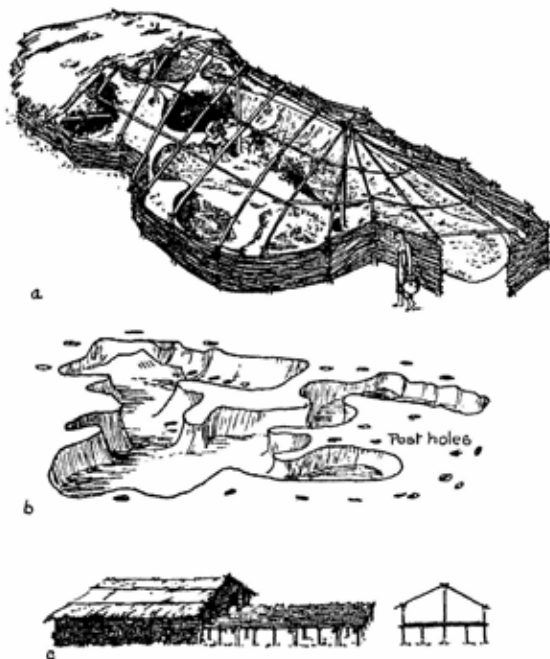


FIG. 27—KÖLN-LINDENTHAL FARMS

a, reconstruction of house; b, excavation of similar house; c, reconstruction of granary with platform for drying grain.

organization, but there is no trace of a chief. The family was the basis of social life, and the tribe was probably ruled by elders.

The latest people were, at any rate, not isolated, for they imported green schist for adzes from a place sixty or seventy miles away. Some vases in their settlement came from the Maine Valley, as analysis of the clay proves.

It is a pity that a summary of the large volume describing this excavation is not published in English, for it gives a wonderful picture of the quiet but not stupid stagnation of peasant life in Neolithic times.

Eastern Developments.—While the stroke-ware people were pressing westward, a new culture was developing along the river Tiza or Theis. This seems to have been the result of the mixing of Körös and Bükk farmers with Mesolithic hunters and fishermen. The Tiza folk lived in villages of rectangular wooden houses strung along the bank of a river, each house having a door on the long side and the gable-end ornamented with a bull's head in painted clay. In the river they fished with nets and antler harpoons, and the women cooked the catch in large oval bowls. Every house had a large jar which was used for storing grain—exactly like those in Hungary today. The household pots were decorated with roughly incised meanders, concentric circles, and conventional faces in panels, and sometimes with painting applied after firing (crusted ware). Some of these vessels were exported as far as Vinča and Galicia—probably for their contents, and not for themselves.

Of religion there is no trace, unless animal-headed rattles were employed in some ritual; the popular Mother Goddess seems to have been disregarded. In small cemeteries the dead were buried in flexed positions in graves, and some had their feet cut off, perhaps to prevent them from disturbing the living. Obviously these people had ideas different from those of most of their neighbours, and they must have been strongly influenced from some source not yet discovered.

By this time the ferment among Central European peoples

had led to movements and re-groupings which resulted in several distinctive but closely-related groups of cultures.¹ The two best known centred round Polgar on the Upper Theis and Lengyel on the Middle Danube. They show increasing contact with the Aegean and Anatolia, which may mean that more prospectors with larger caravans were establishing trading-posts. Settlers would follow in their train, introducing new ideas and a few articles from their homeland, but soon adopting the country's ways. It is surprising that more direct evidence is not available, but probably this is because few people made the whole of the long and tiresome journey between the Mediterranean and the Danube or the gold-bearing Maros and Toros rivers. Merchandise would probably be carried from one post to another by different tribes. Several kinds of Mediterranean shells reached Danubian II peoples; and a peculiar early Minoan (Fig. 26, *f*) stone vase, shaped like a square block with a hollow in the centre and holes in the corners, must have been seen by them, for they copied it in clay. They also knew the potent Cretan symbol, the double axe.

Copper was increasingly used for a widening range of articles (Fig. 26, *g-i*), including hammered axes. Metal vases of Troy were copied in pottery at Lengyel, and double spiral ornaments of copper wire of Troy II type appeared later at Lengyel and Polgar. Clay stamps imitated Asian stamp seals. Female figurines were of the Near Eastern type, and at Polgar contacts with Thessaly and Macedonia are suggested by the discovery of many model animals, houses and chairs. It is not likely that these were for children's play; possibly they were intended for the use of the dead, who were either cremated or buried in contracted positions. Everywhere new ideas were seeping in and changing the outlook of primitive peoples.

Polgar seems to have had a homely, "countrified" kind of culture, but Lengyel people lived at the junction of trade routes, which they may have controlled, thus receiving all the new ideas which penetrated so far. They built large villages

¹ See Milošević.

and possessed a variety of weapons, some of which were made with hammered copper. The dead were carefully buried with rich offerings, among which were a large number of copper trinkets. As a man and a woman were often buried together, with and without children, it seems probable that monogamy prevailed.

Although generally belonging to the Danubian type, there were tall, powerful people among them. This element may be due to an admixture of steppe warriors, forerunners of the hordes who even then were moving from South Russia to Eastern Europe.

In Bosnia the Butmir culture probably developed as the result of the influence of Tiza folk on the natives.



FIG. 28—BUTMIR POTTERY



CHAPTER VIII

THE PAINTED POTTERY FOLK

THE problems of the prehistory of Eastern Europe are rather startling and difficult to solve. The evidence is seen most clearly in the pottery, and to read about pottery is never interesting. It strikes us as rather a minor detail of life. To the Neolithic peasant, however, the form, texture, and ornamentation of pottery were bound up with tribal traditions, as are peasant textiles today; and if a tribe had artistic instincts they found expression chiefly in pottery. Just because the women potters were so immersed in tradition, their pots give the best clue to the movements of peoples and to the approximate date of their settlements.

Away in the Transylvanian mountains, near the headwaters of the Alt at Erösd, excavators found a new kind of pottery. It was so different from earlier ware, so beautiful and so sophisticated, that behind it must lie the life of a people of unusual interest, people with imagination, initiative and skill—qualities not common among primitive folk.

Erösd seems an unlikely place for a settlement of virile people, for it is a dead end high among the forested mountains. It had, however, two attractions: a fine, open löess ridge on a spur 180 feet above the river, and the proximity of gold and copper. Farming, defence, or trade—which of these attracted the Painted Pottery folk to this remote spot? If the date were known, it would be easier to answer this question. There are some 400 years between the dates suggested. If Hawkes is right in putting it at 2400 B.C., we know that trade in metals was organized by that time, and as near as the

Caucasus pastoral chieftains were amassing great wealth of copper and gold, while in Europe people were settling in most of the metalliferous areas.

Erösd was a well-planned village of about twenty-one houses in rows upon a spur of only one and a quarter acres, and it was fortified on the unprotected side by a double palisade and bank. The strong wooden houses had one large room and a porch, each with a fireplace of stone and clay (megaron type) (Fig. 29, *h, i*). The gable of the roof was decorated with plaster moulding and the walls were coated with plaster.

These people lived well. They had sheep, cattle, goats, and pigs, and with their bows and arrows they hunted deer, chamois, bears, boars, and lynx in the forests, while in the mountain torrents they caught fish with hooks, lines, and harpoons. The farmer had a good variety of tools: sickles with flint teeth, shoe-last celt hoes of rather rectangular shape, perforated antler axes, obsidian knives, bone and horn chisels and borers, bone spatulae, antler picks, and hammers. Copper was little used and was hammered as a soft stone into awls and fish-hooks. The villagers must have been well dressed according to the fashions of the third millennium. They had skin and woven garments decorated with laminæ cut from boars' tusks, gold and copper rings, bracelets and pins, necklaces of shells, teeth and limestone beads. One individual's jewellery was found in a pot. Special stamp seals, called *pintaderas*, with red paint still adhering to them, have been found (Fig. 29, *b*). They were used by smart men and women who did not consider themselves presentable unless their bodies were decorated with spiral designs.

Curious animal carvings have been found and are interpreted as the sceptres of chiefs. One is thought to be a carving of a hippopotamus and is ascribed to Egyptian influence. This is not a wild suggestion, if the gold on the sceptre of Khasekhemui (2675 B.C.) is really from Transylvania, and if Miss Murray's comparison between Tripolye and Egyptian figurines holds good (Fig. 29, *j, k*). Here too the Mother Goddess was worshipped, and it is possible that models of domestic



FIG. 29—ERÖSD AND TRIPOLYE HOUSES
AND THEIR CONTENTS

a, painted pedestalled bowls, bowls and storage jar with lugs for rope handles; b, stamp seal; c, figurines; d, painted ladle; e, flint from sickle; f, shoe-last celt; g, model animal; h, house plan; i, reconstruction; j, Tripolye and k, Egyptian figurines; l, model hut with oven, water pots, and woman grinding corn; m, incised Tripolye ware.

animals were also part of her cult as in Asia Minor (Fig. 29, c, g). One male statuette is known.

All this array of Neolithic culture seems primitive compared with the well-made and beautifully painted pottery, which gave distinction and colour to the dark interiors of the log cabins. Meals round the hearth were eaten from brick-red or orange-painted bowls; liquid was drunk out of beautiful handleless cups decorated with flutings or painting, or from large beakers, and the stews were served from the cooking pots with gaily painted ladles fifteen inches long. Food was piled on elegant red pedestalled bowls about eighteen inches high, decorated with swirling designs, sometimes outlined in black (Fig. 29, a). The shapes of the pots were still simple, but some had tubular spouts, as in Vinča.

So beautiful is this pottery that it might be the work of professional potters, but enough kilns have been found to serve all the houses. So apparently pottery-making was still a domestic art. The characteristic designs are long S spirals which twirl gracefully in an artless but well-planned fashion round the pots. Many are most skilfully drawn, but evidently even this precision did not satisfy some women, for they actually made stencils for their patterns. Besides being painted, pottery was decorated with shallow fluting, modelling, and low rounded bosses. These artistic potters were no longer dependent for inspiration on the materials they already used, such as basketry and leather work, but could think out independent designs of complex form.

Tripolye.—Right across the rich farming country of the Black Earth lands of Moldavia, Galicia, the Ukraine, and South Russia a similar painted pottery culture is found above a level containing monochrome and incised pottery only. It is known as the Tripolye culture, and the type site is Cucuteni.

One of the fascinating problems of Neolithic times is the origin of, and the reason for, the uprising of strongly individual cultures like these from a rather monotonous substratum of peasant life. There seems to be little doubt that this blossoming of painted pottery culture took place near the Carpathians,

and was not introduced from Asia, in spite of resemblance to Chinese Neolithic ware, for the best is in the west and, very curiously, in the earliest villages. Hawkes thinks that the Starčevo painted pottery provided the stimulus for this style, but, if so, some vital influence soon made the child rise above the parent. Certainly the people who diffused it came into close contact with Mesolithic hunters, from whom they borrowed the use of antler and probably animal-headed carvings; but in Russia such hunters were making a coarse ware which was decorated with impressions made by a comb, and so has been called "comb ware." Plainly they did not supply the artistic element.

Is it a coincidence that the Tripolye region was the home, long before, of a unique artistic tradition? Gravettian hunters of the Palæolithic Age carved on their bone bracelets and ornaments meanders and zigzag designs which were amazingly like those of Tripolye.¹ If the tradition was alive after 4,000 years, why did the intervening Mesolithic population show no sign of it? So little exploration has yet been undertaken in Eastern Europe that there is still hope that future work may reveal the reason for the sudden appearance of new cultures in the heyday of their strength.

From the number of Tripolye villages discovered it is evident that the fertile Black Earth lands were well populated at this time. Villages were often built on promontories above rivers, and Cucuteni was defended by a ditch and wall. Other sites show houses arranged in circles from 60 to 180 yards in diameter. On one clay platform were two concentric circles, the outer 200 m. in diameter, with eight buildings and either a cattle enclosure or a ceremonial ground in the centre.

The dwellings varied considerably in size and design. Large ones were as much as 140 square metres, and small ones only 30 square metres. The earliest seem to have been the wattle huts sunk three feet in the earth, with a large double stove which occupied a quarter of the floor space, and the irregularly oval pit huts, which had a shallow porch and an inner room lined

¹ *Men of the Dawn*, fig. 67.

with benches and warmed by large stoves of timber coated with baked clay. Probably later were the large square platforms of hard baked clay and straw, the remains of which show impressions of oak logs and branches, with querns and ovens among the debris. These were dwelling-sites on which were erected rectangular houses divided into partitions, with oak roof-posts and probably walls of unbaked brick. Some large houses were divided by partitions into four or five rooms, each with its stove and cooking pot, as if a room had been added when a son married. Only at one site has a single large house, richly furnished, been found which might have belonged to a chief. In it was a stone mace-head.

A delightful house model, raised on legs, shows a single-roomed round hut (Fig. 29, *l*). It has a huge stove, three large water-jars on a shelf, a little figure of a woman grinding corn on a saddle quern, and a small circular window. In another model the floor and walls are decorated with incised patterns. This is almost an exact replica of Egyptian soul-houses which were placed in cemeteries to provide homes for the dead. Egyptian influence is also suggested by a peculiar figurine (Fig. 29, *j-k*) resembling those of the Twelfth Dynasty (1994-1781 B.C.). Egyptian merchant explorers were roving over most of the known world in those days, but this is the first hint—if it is one—that they reached Europe.

Impressions on the clay debris of hut walls show imprints of rye, wheat, millet, barley, and grape seeds, and the charcoal from their fires tells of neighbouring oak woods. Some farmers had special drying-rooms for grain. Probably from the steppe folk to the east they learnt stock-breeding, and the numerous models of bulls and bulls' heads prove the value they attached to it (Fig. 30, *o*). Horses were known at a later period, but whether they were domesticated is not known.

There was still much hunting with triangular stone arrow-heads or bone-points, and also fishing with harpoons and hooks. For tools there were the usual stone adzes and shoe-last celt hoes, and also perforated hammer-axes and picks or adzes of antler. Although flat axes and pickaxes of copper were known,



FIG. 30—THE ART OF THE PEOPLE OF THE BLACK EARTH LANDS

a-f, painted ware of Tripolye (*a-b*, "fruit stands"); *g-h*, incised figurines; *i, j, o*, model animals; *m-n*, Cucuteni B ware; *p*, altar or offering-table (?); *q*, spindle whorls.

the people had really a Neolithic culture, and metal articles were probably occasionally imported.

Like the western Neolithic peoples, they made numerous figurines of the Mother Goddess, and those at Cucuteni are entirely covered with spiral patterns (Fig. 30, *g, h, k, l*). It is hardly possible that even the most fanatical people were tattooed to this extent! Possibly other cult objects are model "stools" or "altars" (Fig. 30, *p*), models of bulls and other animals, and three curious platforms of baked clay 20 cm. high and 1.8 m. in diameter with semi-circular projections at the corners. These are painted with concentric circles and point to the four points of the compass. Miniature vases might perhaps be added to the list.

The pottery was more frequently incised than painted, but the designs were still usually based on the spiral. All the ware was of excellent quality and often made in advanced shapes, such as large periform jars, double vases like egg-cups, and jars with conical lines; but pedestalled bowls and other Erösd forms are rarely found east of Cucuteni.

The dating of this culture is a tantalizing problem. It seems probable that Phase I was contemporary with Erösd, and the five phases—O to IV—probably lasted hundreds of years; but, after repeated onslaughts of the steppe warriors, it vanished completely and left little or nothing to influence succeeding people.



CHAPTER IX

THE VARDAR-MORAVA CULTURE

It is now possible to appreciate the difficulty of accounting for the second invaders of Macedonia and East Thessaly. They appeared suddenly, as it seems, with a civilization very different from that of the first Neolithic farmers (see p. 72) but closely resembling those described in the last chapter. The newcomers introduced the megaron type of house, ring-walled fortifications, gold (rare) and copper ornaments, flat copper axes, flint arrows and spear-heads, blunt butted and flat axes (often hafted in antler sleeves), and buttons with V perforations. Their polychrome painted pottery, with spirals and meanders, resembled that of Erösd, but their black, burnished pottery had the Vinča type of decoration. Even the Mother Goddess appeared in a new form. The ever popular shoe-last celt was still used, but bevelled adzes disappeared.

These people are named after their best known fortified site at Dimini in Thessaly. Here the defence lay less in the height of the seven encircling walls, behind which the defenders stood on low platforms to shoot their arrows and sling stones, than in the tortuous valleys along which the attackers could easily be ambushed. There were no towers or gatehouses; the entry was through small openings in the walls (Fig. 31, a, f). In the centre stood a large megaron house (perhaps the chief's), consisting of two large rooms and a porch with two pillars. The front and larger room had two pillars and a central hearth, while the back room probably contained the oven.

Standing under the gabled porch the chief looked out across

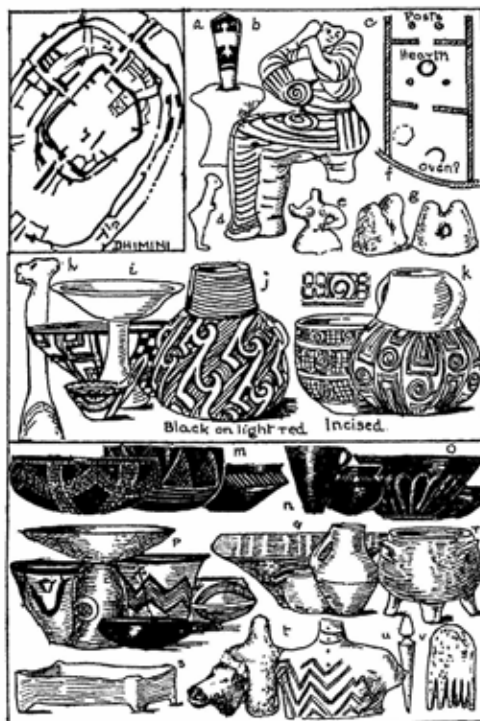


FIG. 31—DIMINI CULTURE

a-k, Thessalian II: *a*, plan of fortified village: *f*, plan of megaron: *h*, spoon: *j*, painted pottery: *k*, pots incised to imitate wood carving. *m-v*, Macedonian II: *m*, incised and (*o*) fluted black ware: *p*, painted ware: *s*, pottery tray: *u*, *v*, bone pin and comb.

a wide courtyard to a group of farm (?) buildings opposite and a narrow gateway in the wall which enclosed the yard. Over the top of the wall he could see the roofs of smaller houses cramped in the narrow lanes between the fortifications.

In one house the stone pivots on which the doors swung are still in place. Another house was completely destroyed by fire, but its primitive furnishing, buried in the ruins of the roof, is exactly as the owner left it when he fled. In it the excavators found jars, bowls, cups, storage jars in crusted ware, celts (two bored), corn-grinders, a small bored deer-horn hammer, a few needles and scrapers, terra-cotta spinning-whorls, clay rests for holding spits like those used today in the Balkans (Fig. 31, g), red ochre, the household goddess (figurines with stone heads stuck on clay bodies) (Fig. 31, b), and stores of food—bowls of peas, lentils, and figs. To complete the picture one must imagine the perished baskets, leather bags, skin and woven garments fastened with shell or conical stone buttons, the copper trinkets, and the wooden articles.

The female figurines are often so conventionalized that it is difficult to recognize what they are. Long stone plugs with futuristically painted features are heads, which were inserted into badly modelled clay bodies (Fig. 31, b). Some are almost fiddle-shaped, but longer than the characteristic Cycladic ones, and one, holding a baby, is elaborately painted (Fig. 31, c).

A new and charming kind of pottery was developed, in which the rectangular, chequer, and step patterns of the old Sesklo culture were combined with spirals and meanders painted white, chocolate, or black on red, white-slipped, or buff grounds (Fig. 31, f). The two sets of motives and the fineness of much of the pottery might be due to the marriage of Thesalian women to their conquerors. It is worth while to study the illustrations in Heurtley's *Prehistoric Macedonia* in order to respect and enjoy the skill of the people who had the simple good taste and initiative to produce from a few basic patterns such a surprising variety of designs on bowls, jars, cups, and "fruit stands." No wonder such potters had devised a kiln

with well-arranged draught holes through which they could control the heat as their pots baked. At Olynthus a model of such a kiln has been found with little pots inside it.

A fine silver-grey ware was so valued that it was frequently mended. The incised pottery has the same combination of square and spiral patterns as the painted, and is sometimes so deeply cut that it recalls chip carving, as at Alişar in Asia Minor (Fig. 31, *k*). A new ware was the widespread black "carboniferous" pottery with patterns made by stroke burnishing, fluting, beading (as on modern silver), pellets, and incised spirals (Fig. 31, *m-o*).

This culture travelled down Greece to the Corinth area, but, apart from East Thessaly, its influence was not dominant, and the older peoples carried on their own culture in rather separated groups.

The problems raised by the interesting Dimini culture are legion. The old theory that the painted pottery people or the Danubians moved to the south and settled in Greece is now discarded. One fact is clear, that by about 2500 B.C. a single culture, of which Dimini is a part, spread from Vinča along the Morava and Vardar Valleys (hence its name) to East Thessaly.

The main problem now seems to be whether it started from Anatolia and went north, or whether it came east from the Vinča-Körös region (Map; Fig. 22). The megaron house, spiral designs, polychrome painting, pedestalled bowls, fortifications, and metal ornaments can be matched in Erösd or Tripolye, though it is not believed that a migration from this region reached Greece. Hawkes thinks that there was a backwash from the Vinča area, bringing the painted pottery technique from Starčevo (whose pottery most closely resembles that of Dimini) and the common black, burnished and fluted ware from Vinča, so that at the same period some Vinča-Starčevo people moved south to Greece about 2500 B.C., while others went east to found the Erösd culture. If this theory is correct, there must have been other unknown influences at work in each movement to account for the megaron houses and the

fortifications, neither of which seems to have been native to the Vinča cultures. Perhaps the restlessness that we can vaguely see among the Tiza and Danubian II peoples may have caused the expansions of the Vinča folk.

Gumelnitza Culture of Bulgaria (Fig. 32).—Whether this culture was due to the impact of Dimini refugees from Macedonia or to Vinča influence, it soon developed a very distinctive individuality. Though based on Boian A, it shows

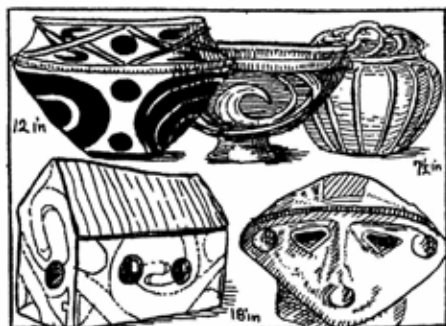


FIG. 32—GUMELNITZA POTTERY AND MODELS

clearly how the folk movements and commercial travellers of that day influenced country people. Three phases can be distinguished, the first probably about 2400 B.C., and the last just before the coming of the Bronze Age.¹

Stone for implements was fetched from considerable distances; pots were imported from the Tripolye and Vinča regions, and spondylus shells from the Mediterranean. Troy and Anatolia exerted a strong influence; copper axes and adzes were imitated in stone, and copper double spiral-headed

¹ See Milojević. He dates Gumelnitza culture 2600 B.C.

pins were imitated in bone long before men learnt to make them in hammered copper in Phase III. Face urns, spouted jugs, and stamp seals (but with spiral designs) from the Near East were also copied; these, no doubt, were treasured by the smartest people as much as Paris frocks and hats are treasured today.

Dimini's influence is seen in the peculiar ring pendants and, perhaps, the painted pottery designs. Specialized industry may have begun, for hoards of unused bone and flint implements have been unearthed—perhaps the stock of village craftsmen who bartered them for food, etc. The pottery continued the tradition of Boian A, but with less excised designs and more rusticated and painted (graphite) ware.

These folk paid much attention to religion and magic. The Mother Goddess was revered in many types of figurines, some carefully modelled and a few with inlaid eyes of shell, as in Sumeria; but other figures were mere prisms or grotesque silhouettes cut in bone. In later phases male figures and phalli were also made. Model altars and thrones, and in Phase III models of houses (Fig. 32), animals, doves, and stone sceptre heads, may also have been cult objects. In marked contrast to the emphasis on religion is the neglect of the dead, who received few gifts and careless burial.

Unlike the Dimini people, these folk show little sign of warfare. Their weapons were a few spherical mace-heads and bone, or, more rarely, triangular flint arrow-heads. For fishing they had adopted the Mesolithic antler harpoon, such as was used on the Tiza. Probably they lived when the Erösd and Tiza folk were expanding, and, in later phases, when Troy was the Liverpool of the Near East, and sent out merchant ships wherever there was a sign of trade, taking "civilized" goods to remote country villages as our traders supply kraals in Africa today with cycles, Manchester cotton, and petrol tins!



CHAPTER X

THE SPREAD OF THE BATTLE-AXE WARRIORS

FOLLOWING the colonization of the Danubian corridor and Central Europe by peaceful farmers and prospectors, and the rise of many mixed groups of Mesolithic and Neolithic peoples, strange signs of disturbance and new influences cropped up in most areas. These may have been boundary vibrations produced by the advance of a new and very different kind of people, known as the Battle-Axe warriors, who from about 2300 or 2200 B.C. to 1900 B.C. swept over most of the land from the Black Sea to the Baltic and from the Urals to the Alps and Vosges Mountains. Everywhere they retained many practices in common, while picking up others from the people among whom they lived—usually as an aristocracy. They repeatedly overran and finally destroyed the Painted Pottery folk of Erösd and Tripolye; they appeared as a dominating class among the Danubians, and probably were responsible for many of the upheavals that troubled the Near East at that time. Nowhere does their culture appear as a faded shadow of that of oriental empires, but always as a lively original product of an uprising and forceful people who left a trail of conflict, movement and change wherever they went.

It is generally agreed that many elements in their material culture were derived from the wealthy cities of Anatolia and Mesopotamia, but their spiritual heritage was vastly different from that founded on the Mother Goddess cult. Theirs was a masculine, hero-worshipping, warrior-pastoralist mentality.

Over most of Russia and Northern Europe hunters and fishermen had shared a common Mesolithic culture for generations. Along the river valleys of the steppes, among the vast mixed forests of Central Russia, by the lakes, swamps, and sluggish rivers, in pine forests farther north, and along the inlets of the Baltic, they had lived in groups and had adapted themselves successfully to their environment. Though widely separated, they had sufficient contact with each other to trade in rocks most suitable for tool-making.

When, therefore, the heaven of Neolithic culture reached them it probably percolated through kindred peoples fairly quickly, though vast regions in the distant north and east did not receive it until late. One early and perhaps fairly constant reaction to its diffusion was the rise of warrior-pastoral chieftains. As they and their sons tasted wealth and power, their ambition received a spur, and they launched out on ever-widening conquests of their unenlightened neighbours, thus spreading the new civilization.

Perhaps some Mesolithic tribes in the west received their first introduction to Neolithic life from the Danubians (II) and Painted Pottery folk; but all Battle-Axe folk share so many common elements of culture that surely it must have been derived mainly from one source.

Before glancing at the main groups into which Battle-Axe people ultimately evolved, it will be well to summarize their common inheritance.

Their famous weapon was a battle-axe. The forest hunters had long used antler axes with one end rounded and the other sharpened. When chieftains of the Caucasus in contact with Sumeria procured a few metal axes the news soon spread, and men began to imitate them laboriously in stone, copying the pattern so exactly that they even reproduced the ridge caused by the junction of the moulds. Eventually several types of stone axes were made, but the most widespread had the knobbed butt of the old antler axe and the splayed-out blade of the metal one. Although axes were used by all warrior groups, only in Central Russia and Baltic lands were they

placed in the hand of every dead man. Everywhere the dead were given their necklaces of boars' teeth and also their drinking-vessels, which were usually ornamented with cord impressions (chapter heading). Probably the vessels contained fermented drink, since this was thought to imbue a man with magical power, as the boars' teeth were intended to give him the ferocity and strength of the savage beast.

Burial practices varied but, except in late and outlying cultures in Sweden and Central Russia, the graves were marked by barrows. In many places the dead were covered with life-giving red ochre and placed in timber-lined graves. These people seem to have been semi-nomadic, but they lived long enough on some sites for their graves to form small cemeteries. Their settlements are little known. They were considerable stock-breeders and may have influenced the folk who so often decorated their houses with modelled bulls' heads. In Central Europe they concentrated where there was good business in natural wealth—metals, amber, or salt—though they probably made subject peoples do the work for them.

The discovery of horses' bones in a few graves has suggested that the rapid spread of these people was due to their use of horses for riding, but it is impossible to say whether the horses were domesticated, and still less whether they were used for riding or traction. As early as 3000 B.C. horses were used to draw chariots in Mesopotamia. The weather probably hastened the dispersal of the warriors, for by their time the wet Atlantic phase had given place to the drier and warmer sub-Boreal and, while the steppes became too dry to support an increasing population of pastoralists, the thinning of the forests made travel much easier.

From a study of the skeletons it is clear that these folk were not invariably of one distinct type, but the general picture is that of tall, strongly built men with unusually long heads and narrow faces and noses. They often had strong brow ridges and facial muscles, but there is no evidence as to their colouring.

Period I (Fig. 33).—The first appearance of the Battle-Axe



FIG. 33—THE EARLY BATTLE-AXE CULTURES OF SOUTH RUSSIA

a, copper adze-axe; b, gold vessels; d, copper dagger; e, copper hammer-headed pin; f, pit grave pottery; g, h, catacomb grave and pottery; i, stone battle-axe; l, models of huts.

folk is in South Russia in the middle of the third millennium B.C. when powerful influences were percolating in from every quarter. Prospectors would be taking caravans to and fro over the Caucasus and Armenia under the greedy eyes of the warrior herdsmen who, no doubt, soon made raids along the trade routes to the luxurious cities of Anatolia and Mesopotamia, returning with rich plunder and inflated ideas of the state a chieftain should keep.

Such chieftains maybe paid visits to oriental kings, who often invited their turbulent neighbours or vassals to their courts to impress them with their royal splendour and power.

Maikop, Kuban.—The result of such contact is seen in the barbaric splendour of the "royal" tombs of the metalliferous Kuban Valley. There, under a huge barrow at Maikop, is a shaft-grave with three wood-lined chambers—evidently a poor imitation of the royal Sumerian tombs. In one chamber a chieftain was buried on a bed of ochre and under a fine canopy decorated with silver and gold lions and bulls. He was generously supplied with round-bodied pots, silver and gold vessels, jewellery, and Mesopotamian axes and adze-axes of copper (Fig. 33, *a, b*). In two other chambers a man and a woman of inferior rank were also buried in ochre, but were provided with poorer grave gifts.

Natchik, Caucasus.—At Natchik, in the Caucasus foothills, a great barrow or kurgan covered one hundred and thirty contracted and ochre-stained skeletons buried in groups with a few stone bracelets and imported carnelian, paste, and copper beads and a copper ring. There was also a crude female figurine, which shows that the hero-worshipping warriors had not yet greatly influenced this district. These people spun, and made round-bodied pots and polished flint axes, but there is no sign of agriculture or stock-breeding.

Mariupol.—Probably of the same age is the cemetery of Mariupol on the Sea of Azov, where one hundred and twenty-six skeletons lay extended across a trench, 28 m. by 2 m., filled with red earth. These people wore necklaces of shells, stone beads, boars' tusks, and animals' teeth. One had a

pendant of stone from the Urals. They used microlithic flints and stone axes, but two men had foreign-looking knobbed mace-heads. No pottery was found, nor any evidence of farming, but neither is there any of fishing or hunting, although these occupations were obviously necessary to food-gathering peoples.

Here are three stages in the development of Neolithic culture among people at an increasing distance from the stimulation of oriental civilizations. At Maikop there was direct borrowing of burial customs and the acquisition of oriental goods either by robbery or barter. At Natchik Neolithic crafts were just being learnt and a few luxury metal goods were being imported, but at Mariupol Mesolithic peoples were barely touched by foreign influence.

Meanwhile the Mesolithic peoples of the steppes and bordering forests had learnt the art of pottery-making. Those west of the Volga may have learnt spinning at the same time, for they decorated their vessels with impressions of twisted cord and therefore are known as the cord-ware people. For pottery ornamentation steppe and forest folk generally used pit markings, shell-edge impressions, or impressions made by a stamp with the end of a small bird's bone. The ware was crude and badly fired. Apart from making pottery, Mesolithic tribes seem to have learnt little from their Neolithic neighbours for some time. In the north and far outlying areas they continued their well-adjusted hunting or fishing life, while the Caucasus revelled in the luxurious barbarism of the Bronze Age and Battle-Axe warriors spread over the Ukraine, Poland, Galicia, and Central Europe.

The story of this penetration towards Danubian, Tripolye, Megalithic, and Northern cultures is very involved, and the evidence is meagre. Generally the cultures which developed from it were the result of the strong influence of wave after wave of warriors on Mesolithic hunters.

The first advance was from the Caucasus to South Russia. While Kuban chiefs were passing from the stage of buying or stealing metal goods to the actual possession of smiths of their

own, their kindred on the steppes between the Donetz and the Volga emulated their customs as well as they could. They buried their dead under barrows (kurgans) in shaft or pit graves (yamno) which were sometimes lined and roofed with logs. In deeper graves the carpenter's tools were found on a ledge in the wall of the grave. The floors of some graves have holes for poles which met in the centre to form a tent for the dead who lay on biers or beds of rushes covered with ochre. These chieftains imported a few metal goods and fastened their clothes with bone hammer-headed pins (Fig. 33, *e*), copied from Kuban metal originals. They left no trace of agriculture nor, except for a few sheep's bones, of pastoral interests. It has been suggested that the absence of animals' bones may be due to the communal ownership of flocks and herds. It seems odd, however, that a warrior should be supplied with his egg-shaped cup for drink, his fishing-tackle (hooks and harpoons), his hollow-based flint arrow-heads, his clothes and ornaments, but never a joint or steak to satisfy his hunger! As mothers and children, but not men and women, were buried together, probably the matriarchal system persisted here. Later in the Don and Donetz Valleys a man and a woman were buried together. So apparently the patriarchal system of the steppe warriors eventually prevailed. Cattle were sacrificed to men, but women and children were worth only sheep!

These collective graves are called "catacombs." They are copies of the rock-cut Ægean tombs (Fig. 41, *A-C*) and were probably introduced by the traders who brought winged copper beads, fayence, and figurines. All the belongings of an agricultural community were now found in the graves, among them the bones of domestic animals—chiefly sheep, but also some horses. The round flat-bottomed pottery was sometimes decorated with spirals, a motive used, perhaps, by captive Tripolye women (Fig. 33, *h*).

The Forests.—For a long time the hunters and fishermen who roamed over the endless forests covering the northern half of Russia lived without knowledge of the great events and the new discoveries of the world of their day. At last, however, some

cord-ware tribes went north and came into contact with them. The natives quickly learnt to make pottery but apparently not weaving, for they imitated the cord impressions on their new neighbours' pots with comb-marks or with the end of a belemnite or a shell or the notched edge of a pebble, which gave a similar effect. Actual stamps which fit the impressions on this ware have been found. At a later time nets were pressed on the wet clay to give a pattern.

With little change in their lives these folk lived on at the edge of the forest on sandy soil near lakes or sluggish streams. The dog was their only domestic animal, and it may have been used to draw sledges, for a sledge-runner has been found in Sweden.

Much later, when the rest of Europe was using bronze, the steppe warriors overran these peaceful natives and imposed what is known as the Fatyanovo culture. Probably warriors married forest women, for the pottery has both comb and cord impressions.

Central Europe.—It is now necessary to go back to about 2300 B.C., when the Battle-Axe folk were destroying the last Painted Pottery civilizations and were sweeping on to Hungary and Poland, causing widespread disturbances which may have had repercussions over the whole Danubian Morava-Vardar province. Wherever they went they appear as the overlords of the earlier people, on whose labour they probably grew rich. The whole situation becomes very complicated; although the warriors dominated every tribe, and the result of their impact was a whole series of new cultures, yet these were not merely implantations of their own culture, though that took the leading role.

As they penetrated into Central Europe they brought the several Danubian II cultures to an end. Later they spread to Germany, and in Saxony and Thuringia a very powerful group developed. Their settlements were frequently on uplands and heaths where there was good pasturage and good hunting. They concentrated on strategic points above the Saale Valley so that they could control the trade in ores and

salt. Many of their large villages of timbered houses and their large cemeteries have been discovered. Unfortunately the graves tell little of their culture. Some people were buried in pits, others in wood-lined shaft graves, and still others in fairly large cists which might accommodate from two to six persons.



FIG. 34—SAXO-THURINGIAN AND ZŁOTA POTTERY

c, model of ram, Jordansmühl.

A few cists are divided into two compartments by a port-hole slab, and others are entered through similar slabs. This tradition may have travelled all the way from the Caucasus, or it is just possible that it was due to impact with Megalithic people.

The typical weapon of these warriors was a splendid faceted battle-axe of stone, ground skilfully to imitate a metal axe

(chapter heading). They also used antler axes and almond-shaped flint or greenstone adzes; a few possessed spherical-headed maces or flint daggers. Necklets of wolves' teeth were usually worn, and often mother-of-pearl discs with a cross drilled on them. Amber beads, copper rings, and spirals were rare treasures. Their cord-impressed pots were the high-necked beakers and amphoræ (Fig. 34, *a*).

About 2000 B.C. began their great expansion, when they started to push up the Elbe, disrupting and dividing groups of Northern culture people and soon reaching the pleasant land of Schleswig-Holstein (p. 245). To the east they swarmed back over Bohemia, Moravia, Hungary, Silesia, Poland, and the Ukraine, while to the west and south they reached the Rhine and the northern Alpine villages.

As a result of these conquests the northern plains of Central Europe seem about this time to have been a racial patchwork of many separate but related groups. Some of these were semi-nomadic from choice, and others were forced to move because of the expansion of warrior tribes. One Battle-Axe group, whose round-bodied, straight-necked vessels with cord impressions turn up from the Saale and the Elbe to Poland, seem to have been a powerful influence (Fig. 34, *a*). They are known as the Globe Amphoræ folk, and as similar round-bellied pots and port-holed cists, such as they sometimes used, turn up in South Russia, it is probable that their leaders hailed from that quarter. Along the Oder Valley none of these Battle-Axe tribes made headway, for there the Oder folk with their "flower-pot" vases seem to have been firmly entrenched.

To the south these wandering pastoralists, pig-breeders, and warriors came in contact with the last Danubian peoples, such as Jordanshmul in Silesia, Bodrogheresztur in the Tisza-Banat area, and the Baden in the Danube basins and on the Upper Vistula. This last group had domesticated the horse.

So a little before 2000 B.C. very strong and important movements of people were revolutionizing the history of Europe. The Megalithic seafarers were sailing into most available ports on the western coasts and the British Isles; the Beaker

travelling merchants were carrying trade and the knowledge of trade along the inland routes of Western and Central Europe; the Battle-Axe warriors were on the move from Holland to the Ukraine; and in Hungary and the south a Copper Age civilization was well advanced.

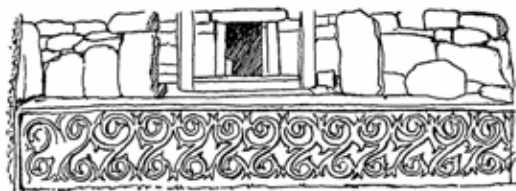
It is satisfying to give these folk descriptive titles, but no archæologist imagines that such titles are strictly accurate; that Beaker traders never fought, and that warriors never tilled the ground nor stooped to commerce. Behind these prominent groups were always the older inhabitants, the Danubian peasants, the Mesolithic forest-dwellers transformed into farmers, the remnants of the Painted Pottery folk and the early inhabitants of the steppes. These people may have been dominated, but they were not exterminated, and they must have made a great contribution to the population and the culture of the Continent.

Złota Culture.—The way in which several races, living together, can give rise to a distinct culture is seen in Poland, where people with Saxo-Thuringian vessels lived with a group who used funnel-neck beakers, another group who made globe amphoræ, another handled cups, and still another with "flower-pot" beakers from the Oder (Fig. 34). It seems as though these tribes, living at first as separate units, soon merged, and the pottery of one group was decorated with the patterns of another. Apparently these folk lived comfortably together, for their large cemeteries attest a well-populated land. Stock-breeding was the principal occupation, and for the first time in Europe cattle, pigs, and horses were given ritual burial. Their graves were often of the pit-cave variety of South Russia.

Boat-Axe Culture.—Finland, Sweden, and to a lesser extent Norway, were reached by a group of Battle-Axe folk from Poland or Central Europe. Their beautiful axes were of a peculiar boat shape (chapter heading). In Scandinavia the hardest rocks were most skilfully worked if they were beautiful. The precision, perfection, and the polish of these axes are wonderful.

Finland was never reached by Megalithic seamen, and probably the Boat-Axe invaders introduced farming to the forest folk who lived by the sea-shore or on the shores of its innumerable lakes.

There has been an immense amount of controversy over the origin, distribution, and race of these warriors, and violently opposed theories have been propagated. The German School declared that they were pure Nordics and that they originated in Scandinavia or Germany, whence they expanded to Russia and the West. Now, however, it is generally agreed that they spread from South Russia to the North-West. Coon, the eminent authority on European races, says there is no evidence that they were pure Nordics, though it is probable that Nordic races were included among them. The one important and undisputed point is that they diffused the Aryan or Indo-European speech, which is found wherever they settled; but whether the language was developed along with their culture in their original homeland or whether they were merely carriers of it is still a very controversial point. Most probably, as Hawkes says, the underlying unity of all Battle-Axe cultures is that of the old Mesolithic populations, behind whom were the Gravettian hunters of the Old Stone Age, and the Aryan speech is rooted in the Mesolithic.



Part III—Migrations to Western Europe

CHAPTER XI

MALTA: THE SACRED ISLE

As we look back over the centuries Malta appears as an island of glamour and mystery. Neolithic seafarers came there probably from Asia Minor, but they rapidly developed a unique culture which has excited and baffled all students who have tried to probe its secrets. Yet surely the answers to many of the problems of Megalithic culture—e.g., the use of enormous stones for building which gave us Stonehenge, dolmens, etc.—lie in the vast temples of this island.

It must have been an exceptionally important and sacred place in the third millennium B.C. when ships were venturing ever farther west, even out on the dreaded ocean and up the western shores of Europe to our islands. From the Near East they could creep along the Mediterranean coasts until they headed for Malta, whence they had to take to the uncharted and open sea. Well might they seek the protection of the goddess of the island and anxiously inquire of the oracle concerning the dangerous voyages ahead. For such help they would be willing to pay lavishly.

Why an advanced people should choose to colonize the island is a problem, for in Neolithic times it was much as it is now—a sunburnt, barren mass of rock, with soil only in the valleys, and lacking metalliferous rocks to encourage prospec-

tors. It might have attracted pirates, but its inhabitants were peaceable and had no weapons.

It seems difficult to escape the conclusion that it was early chosen as a sacred island and devoted to an offshoot of the Asiatic cult of the Mother Goddess, whose priests rigidly retained and sanctified the old use of stone implements. No metal was used on the island, though visiting sailors must have been familiar with both copper and bronze.

A large population lived there in a well-organized society which supplied much willing or unwilling co-operation in public works and in the erection of innumerable temples, built of enormous slabs and blocks of stone. It is almost incredible that buildings so large, with walls made of slabs commonly 12 feet long, 5 feet wide, and 2 feet thick, were erected by men without machinery and using only stone tools.

The oldest temples were simple elliptical cells, with a door on one long wall and a niche facing it on the other. A stone model of such a building shows a common feature of Maltese temples, the use of rectangular slabs set alternately across and vertically along the wall to give the recessed effect often seen in Egyptian and Assyrian temples (Fig. 35, g). The roof of the model consists of long flags curved from the back to the front. Archæologists have searched in vain among the ruins of ancient cities from Mesopotamia to Spain for the prototype of this simple yet distinctive building.

The use of enormous blocks of stone became a passion and a creed with many races for several centuries over a belt of the earth's surface stretching from our island to India and the Far East, and still its origin eludes us.

It is impossible to guess exactly what ideas and practices the first-comers to Malta brought with them, but the continuity of the culture through some centuries is certain. Richness and elaboration rather than fresh motives characterized it. Certainly the earliest sanctuaries were the simplest and were scarcely decorated at all (Fig. 35, g). Then came the addition of another aspidal room to the first with a short passage between them and a semicircular paved forecourt.

At the wonderful site of Hal Tarxien three temples open one beyond the other (Fig. 35, *b*). The ground plan of these temples gives a false idea of simplicity; a worshipper entering them long ago must have been tremendously impressed and awed by their magnificent architecture, decoration, and equipment (Fig. 33, *b, e, f*). He would find the semi-circular forecourt a busy place, noisy with the chatter of pilgrims and the lowing and bleating of sacrificial animals. Through a fine portal he entered a passage and came to a well-paved central court thronged with priests, people, and animals. Over all towered the colossal seven-foot figure of the obese Mother Goddess, clad in a fluted skirt, below which enormously swollen legs ended in tiny feet. Near by priests in long skirts and wearing short wigs were burning sacrifices to her, and the fumes mingled with the incense burning in the hollowed tops of pillars.

As the pilgrim wandered through splendid courts into apses with beautiful altars and along stone-walled passages, he saw impressive and lovely things on every side. One chapel had a remarkable altar carved with a row of sacrificial animals—four goats, a fat pig, and a ram (Fig. 35, *e*). The end room of the first temple, perhaps the holy of holies, contained a shrine with a trilithon doorway and a twelve-foot altar (nearly all of one block) richly carved with S-shaped budding spirals (chapter heading).

In the first court of the second temple worshippers stood in awe before two stone pillars mounted on cubical blocks. From a room near by came the stench of old bones; it was packed with the remains of sacrifices; over the entrance was a carving of two bulls and a sow, and in the room stood a water-cistern. Out in the central court the pilgrim joined the crowd that watched some mystic ritual round an enormous log fire blazing on a circular stone fireplace, four feet in diameter. The last temple was simple and austere, but probably the pilgrim entered it with awed trepidation, for there spoke the goddess through a slit in a wall. After hearing her oracle, he strode along the maze of rooms and out into the sunshine,

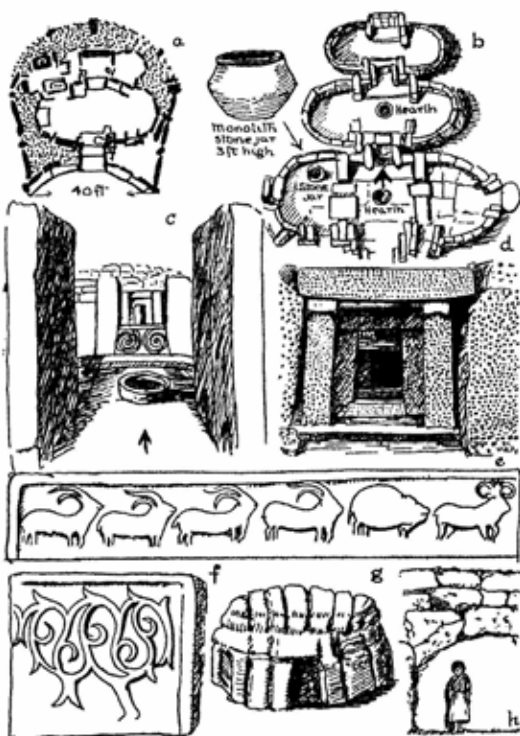


FIG. 35—MALTESE TEMPLES

a, plan of Mnajdra; *b*, air view of second temple, Tarxien; *c*, interior, second temple; *d*, interior, Mnajdra; *e*, frieze of sacrificial animals, Tarxien; *f*, carved altar slab, Tarxien; *g*, model of single-celled temple; *h*, wall, Gozo.

feeling twice the man he was, and ready for all the perils he might meet.

The points of interest in these temples are endless. Everything was on the grand scale and beautifully finished. The apses were covered with corbelled roofs, and one had a large block which was shaped to form the first stone of an arch, though it is not known whether the arch was ever completed.

The Maltese cut twin conical holes everywhere—on floors, door-jambs and lintels, walls, pots, and even statuettes. Some of them can be explained—e.g., those in floors may have been used for the ropes which tethered animals, those in door-jambs for hinges for curtains or doors, while some on vases were for string handles; but many appear purposeless. In the temples they were usually closed with conical plugs and contained bones, flint knives, and various oddments. Certainly they had some religious significance, as had the numerous well-made stone cones and balls so frequently found in the temples.

At each end of the forecourt at Hal Tarxien are blocks of stone, ten feet square, screened by three massive walls, and in the centre of each block are five conical pits about one foot deep and another on the rim. Near by is a heap of a hundred stone balls of various sizes. M. Zammit, the explorer, wonders whether they were thrown into the holes for divination.

The room of the oracle still stands. A space behind the apse, in which the dividing slab has a slit in it, enables a person in the small room to see into the apse without being seen. A small curved channel has been cut in the slab through which a priest, acting as the voice, might drop a small object, such as an amulet, at the feet of the worshipper.

All the equipment of oriental ritual was found in the temples; the vessels are the finest in Malta and many are very large. Also great basins, 3 feet high, were cut out of blocks of stone, and many stone slabs were pitted all over with small hollows—a most laborious mode of decoration (Fig. 35, *d*).

The number of temples still surviving is astonishing, and far more must have vanished. The greatest concentration at

present is near Valetta, whose importance was as great in Neolithic times as now. Seven miles south of Valetta is the interesting temple of Hagar Kin, where a number of small enclosures may have been animal pens or store-rooms similar to those at Arpachiyah.

A recurring feature of the temples is the hole cut in a slab which resembles the "port-hole" so frequently found in Megalithic tombs. In fact, analogies with Megalithic architecture are numerous in Malta—e.g., the use of trilithons (Fig. 35, *d*), the plan of the temples, the semicircular forecourts, the corbelled side chambers resembling tholoi, cup holes, spiral decoration, the isolated pillars, and above all the persistent use of enormous slabs of stone. Dolmens and menhirs or standing stones are common in Malta and Gozo. Whatever the exact relation of the Maltese culture with western megaliths, it can scarcely be doubted that such a concentration of magnificent sanctuaries and such a well-organized and powerful priesthood must have exerted a profound influence far beyond the island itself.

Maltese culture is so unique that it suggests a state of isolation such as could hardly have occurred. Perhaps its very popularity rather than its isolation decided its character, for priests in charge of a cult which could exert such power over people's minds—and purses—would have every inducement to crystallize and maintain the traditions which produced such results. Innovations would be rank heresy.

As the Mother Goddess was the centre of this religion, it is not surprising that many of her images have been found. Most are outrageously fat; some show her as a series of billows reclining on a couch (Fig. 36, *a*). Some are crude and roughly made, but a few are well-modelled and not grossly fat. Fragments of statuettes of ordinary mortals give a welcome sidelight on the appearance of her worshippers. A few heads have an oval, plump, and rather long face with a prominent nose, a good chin, and a calm, dignified expression (Fig. 36, *d*, *e*). Another type has a rounder face with a pointed chin, thick lips, and slit-like eyes (Fig. 36, *b*, *c*). From Hal Tarxien



FIG 36—MALTESE STATUES AND POTTERY

a, woman lying on couch; *a*, sitting; *e*, priest (?); *f*, part of immense figure of goddess; *g*, clay cones; *h*, tunnelled handle; *k*, black incised ware; *l*, bird between cow's horns; *m*, *r*, studded ware; *n*, inlaid ware; *o*, drawing of house (?).

comes a great treasure, the broken figure of, perhaps, a priest. He is a short, sturdy man with a large head held well back on a short neck, hands clasped over his waist, wearing a short curled wig like that of a barrister, and dressed in a long skirt (Fig. 36, e). The dress and pose of this statuette (two feet high) are strikingly like those of Chaldean priests.

Malta had a huge underground sanctuary carved out of the rock at Hal Saflieni which embodied the same ideas as the temples. There were several rooms in three stories, some with trillithon doorways carved out of the rock, oracle chambers, and a ceiling painted with mystical spiral patterns. So holy was this place that people ardently desired to be buried in it, and at last it was converted into a mausoleum. When excavators opened it they found the remains of no less than 7,000 bodies and grave-offerings buried in red field soil.

Everything goes to prove that Malta had a large population, but very little has been discovered about the life and racial characteristics of the people whose hard work made its name famous. In spite of the vast number of bones in the Hypogæum, all that can be said is that they belonged to the Mediterranean race, whose members were carrying civilization to so many lands.

The majority were farmers, and when the population grew so large that the valley soils could not feed them, farming was hard work indeed. The bare limestone hills had little or no soil, so great quantities had to be carried laboriously up the hillsides, and terraces had to be flanked by stone walls to prevent the soil from being washed away by rain. How this tremendous project was carried out has always been a mystery, but M. Zammit thinks that he has solved it. From the valleys up to many of the hilltops, and over them, deep ruts run parallel for long distances (see *Antiquity*, March, 1928) (Fig. 37). These ruts are usually V-shaped and from ten to twenty inches wide at the top and four inches at the bottom. The distance between the ruts is nearly always 4 feet 6 inches. Grooves over one foot deep are common. Zammit believes that Neolithic carts with wooden wheels made these tracks

over a long period. Modern carts cut quite a different groove. What kind of animals pulled those heavy soil- and water-laden carts up the hillsides? The stone between the ruts is not hollowed by the impact of hard hoofs, so the conclusion is that human animals in large teams did the haulage. Zammit thinks that the ruts were deliberately cut by men in the first instance, and this accounts for the careful planning which is so clearly shown in a photograph from the air, in which as many as ten pairs of grooves are seen running parallel; moreover, after the fashion of railway lines at a junction, many

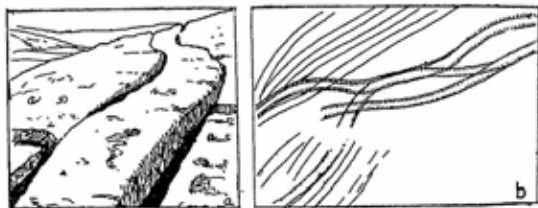


FIG. 37—ANCIENT MALTESE CART-TRACKS

a, tracks worn in limestone; b, from the air.

branch lines curve off from them. Water would have to be hauled up these lines continuously to the growing crops, for water is found only in the valleys.

It is impossible to date these tracks with certainty, but, as later prehistoric shaft graves have been sunk into them, they are undoubtedly very ancient, and the only early population which appears to have had the vigour and organization for such vast undertakings is the Neolithic. If M. Zammit's theory is right, these ancient folk must have few rivals for hard labour and dogged determination.

Although so much of their communal work survives, their own houses have not been found. However, a model ground plan of a cluster of rectangular rooms and a pottery fragment

with a sketch of a building of ashlar masonry may give clues to types (Fig. 36, *o*).

Farmers, quarrymen, artisans, sculptors, butchers, joiners, housewives, and builders all used only stone and flint tools, whose marks can clearly be seen on worked stone. The statues prove that the people wore well-cut clothes, but only doubtful spindle whorls and bone needles are known. Even the ornaments discovered are not as rich and varied as those of many other early peoples. The Maltese wore necklaces and bracelets of shells and axe-shaped amulets and fastened their clothes with the ever popular buttons with V perforations.

From the simplicity of their personal belongings one turns with amazement to the beauty of their pottery (Fig. 36). The potters had only open fires, but they were so skilful in their choice and refining of clays, their fine slips, and their care in baking, that their pottery was rarely equalled in the ancient world. The black burnished ware is superb and the designs are original and charming—budding scrolls and spirals. On painted ware the pattern was formed by scraping off the slip and applying or “inlaying” in the shallow grooves thin, coloured clay which baked red (Fig. 36, *n*). The vase was then dried, polished, and fired. Some vessels were a dull buff, which displayed the vivid red pattern to perfection. In many cases the paint has perished and only the parallel outline incisions of the design are left.

Much of the early grey ware is decorated with straight-line incisions which are usually filled with white or red paste. A very different kind of ware is often found in the temples. It is covered with small pellets of clay, sometimes on a white background, to give a roughened surface—a laborious mode of decoration (Fig. 36, *m*, *r*). A similar effect was obtained by pitting with a blunt instrument. Sometimes the pitting formed an effective background to the scroll designs. Other vases were covered with roughly-modelled leaves, fish-scales, and scallops (Fig. 36, *p*). One interesting vase has under the rim a modelled quail standing above a pair of horns, closely resembling the dove and horn symbol of Crete (Fig. 36, *l*).

A peculiar feature of Maltese pottery is the "tunnelled handles," which are holes, bored through the thickness of the vase, to take string. Some are too small or in the wrong place to be used, but some significance was attached to them (Fig. 36, *f*). Everything in Neolithic Malta hints at strange and peculiar cults which had a tremendous influence on men's minds and actions, and seemed to pervade every part of their lives. That Malta was never isolated is proved by her imports of fine flint, chert, obsidian, and jadeite from other islands.

With such a wealth of information it seems as though the homeland of the Maltese could easily be traced. In the past North Africa has been suggested, but most elements of the culture point to the Near East, several to Arpachiyah, and many are common to other cultures whose ancestry lies in the same direction.



CHAPTER XII

THE EXPANSION OF WESTERN NEOLITHIC PEOPLES

THE spread of Neolithic culture to the west is a strange and surprising story, quite different from that of its diffusion through Central Europe by peasants and prospectors from the Near East. It came by way of Spain in two, if not three, distinct waves. The earlier ones, known as Western Neolithic, were from Africa and Spain. The later, known as Megalithic, came by sea from the Eastern Mediterranean.

First Western Neolithic Migration.—Spain, unlike the Middle Danube basin, was by no means an empty country. A lively Mesolithic hunting folk lived in its caves and often painted figures, animals, and hunting and fighting scenes on their walls. These paintings were akin to the rock paintings of North Africa, and it is likely that the people on the two sides of the strait were related.

Into this country it is probable that some of the North African tribes crossed about 2800 B.C. and lived in the southern caves. As their descendants multiplied they wandered farther, and eventually we find their settlements in El Garcel, Catalonia, South France, the Rhône Valley, Michelsberg, and Switzerland. Their trail is followed mainly by their pottery (Fig. 39).

Their ancestors, centuries before, must have been in contact, either directly or indirectly, with the Badarians and the Fayum peasants of Egypt. From them they learnt to make pottery in the form of leather bags, but they added tubular lugs and incised designs copied from basketry (Fig. 38, *b*).

Another style of pottery known to these people was so popular that in later centuries it was carried as far north as Scotland (Fig. 51, *a*). It is called "channelled" ware, because the design was drawn on the damp clay with a round-ended instrument which left a groove or "channelled" line in contrast to the sharp V cuts produced by a pointed tool in incised work (Fig. 38, *m*). The vogue which this channelled pottery had among many different peoples was probably due to the designs. These were series of concentric semicircles, often alternating with vertical lines, though they degenerated later to alternate panels of horizontal and zigzag or vertical lines. These semicircles seem to have been symbols of the necklace of the Mother Goddess, and were later used on Megalithic Iberian pots and plaques, Breton tomb slabs, and British pottery and tombs. Both design and technique occur in North African pots (Fig. 38, *l*) and the former on Egyptian predynastic Gerzean ware. The cave dwellers also stamped the patterns on their pottery with the edge of a shell (cardinal technique), or incised a broken line made by repeated stabs with a pointed instrument, which gave the effect of coarse stitching (stab-and-drag technique).

Little more is known of these people, who in all probability introduced Neolithic culture to Spain, except that they lived chiefly by hunting, did not understand real agriculture, but kept a few cattle. They used polished stone axes, which were given up by the Egyptians in predynastic times—before 3000 B.C. Like their Mesolithic kinsmen, they painted on the walls of their caves lively pictures which were pregnant with magic power.

Some authorities think that this Neolithic culture was the result of the contact of the natives with the later El Garcel folk and not evidence of a special migration from North Africa.

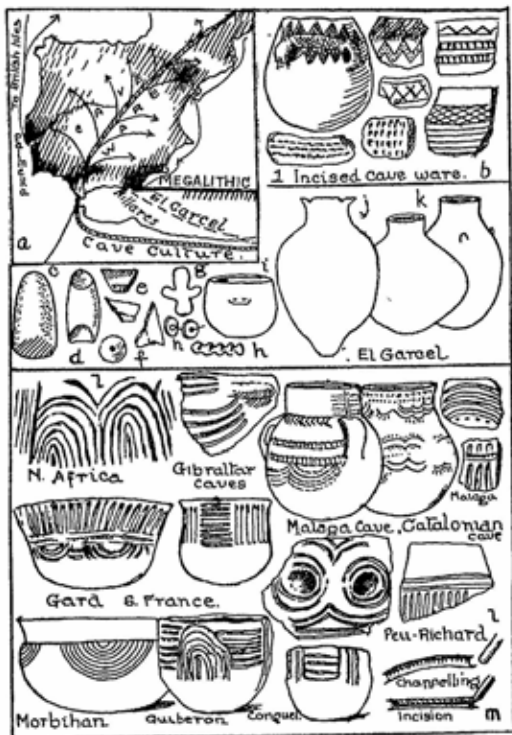


FIG. 38—THE EARLIEST NEOLITHIC CULTURES OF SPAIN

a, map of distribution and probable routes of Spanish cultures; *d*, gouge; *e*, flint arrow-heads; *f*, spindle whorl; *g*, figurine; *h*, segmented beads; *i*, pots with lugs; *j-l*, concentric circle design in channelled technique—from Africa to Morbihan. (For British Isles, see fig. 51.)

The richly-incised pottery, however, was definitely the product of the cave-dwellers' individuality, and it made a large contribution to later cultures. It must be remembered that although the older and more primitive peoples appeared to sink into oblivion when more progressive colonists appeared among them, they still lived on, and often exerted a strong, though usually unrecognized, influence on their neighbours. This is true of the Spanish cave-folk, whose story is not yet fully unravelled.

El Garcel (Hawkes: 2700 B.C.; Childe: 2450 B.C.; Fig. 38, c-k).—The people who settled at *El Garcel*, *Tres Cabezos*, and a few other sites in South-East Spain were undoubtedly invaders. Their culture so closely resembled that of the Badarians, the Fayum, and Merimidian peoples that it is tempting to wonder whether they were of Egyptian descent. If so, generations of peasants must have drifted slowly for hundreds of years across North Africa, ever seeking fresh pastures for their flocks in a drying land and keeping their culture almost intact.

The *El Garcel* folk harvested their corn with straight flint-teethed sickles like those of the Fayum (Fig. 6, w), and their underground silos, plump polished stone axes, and shell beads all recall early Egypt. It is curious that among their pots are shapes used by the Fayum, Merimde, and later predynastic peoples. This suggests that groups of migrants left Egypt at various times and mingled together as they wandered across North Africa.

A fiddle-shaped figurine, however, tells of contacts with the Eastern Mediterranean islands (Fig. 38, g). Probably in some such source, or in North Africa, their custom of collective burial originated. It is surprising to find that folk with these Eastern traditions had beads of callais, a beautiful green stone which later was highly prized by Megalithic people and came possibly from Brittany.

Although they had contacts with several countries, the *El Garcel* folk retained their Mesolithic bone and flint implements. They lived in hilltop villages of half-sunken wattle

huts. Copper slag found among the debris proves that the value of metal was appreciated, though none has been found. Cattle were reared, and cereals and olives were grown, but hunting still provided much of the food.

Their bag-pottery culture developed into that of the Western Neolithic civilization, and it is fascinating to try to trace its drift northward through Spain and France to England, where the earliest farmers made pottery in the manner of the most ancient Egyptians (Fig. 39). The story is difficult to unravel, because it is complicated by the movements of other peoples—the Mesolithic natives, possibly the later cave-folk, then the Mediterranean seafarers with their Megalithic cult, and Beaker traders who followed in the footsteps of other people and entered any trade that offered itself. In France even Danubian influence crept in later, as well as the customs of the Northern folk. The wonder is that the trail of the people of the leathery bag-pottery can be followed at all in the general mixing and crossing and borrowing which took place through the centuries (Fig. 39; Map).

Nevertheless this part of the story is apt to be rather dull, because the dearth of facts gives little scope for the imagination, so that we see a few poor "snapshots" rather than a continuous film of the lives of these people. This scarcity of facts, however, makes the available ones highly important, for they are the only links between the Mediterranean cultures and the earliest Neolithic of England, Northern France, and the Swiss lakes, and they are also the pegs on which fragments of future knowledge must be hung.

Neolithic France.—From Southern Spain Neolithic people colonized part of Catalonia and, later, South France, where they settled widely between the Lower Rhône and the Pyrenees. Unfortunately few sites are known where their culture is stratified between others, but one such is the cave of Bize in Narbonne, which Hawkes dates at 2600 B.C. and Childe at 2400 B.C. There the earliest inhabitants used polished axes and adzes, leaf and chisel-shaped arrow-heads, and made plain bag-shaped pottery (some with lugs) like that of North Africa.

Apparently they forgot the use of metal and reverted to a simple Neolithic life in comparative isolation.

This culture spread eastward to the Rhône Valley, and thence began the great trek northward which carried the earliest civilization to the British Isles. Some groups wandered through Central France and lived in fortified villages on the hilltops—at Camp de Chassey (Saône-et-Loire) (Fig. 39, *l-k*) and Fort Harrouard (Eure-et-Loir) (Fig. 39, *e-g*). They made the old dark leathery pots, used "Mesolithic" picks, hatchets, and arrows, mounted their tools in tapering antler sleeves, and wore segmented antler pendants. This use of antler is a very significant feature of this migration, for it indicates the contact of the farmers with several types of Mesolithic hunting peoples—Tardenoisians of the sandy areas with their pygmy flints, Azilian fishermen with their antler harpoons and tools, and the forest folk who were well supplied with antler picks and hammers, flaked flint axes (tranchets), and chisel-shaped or transverse arrow-heads (Fig. 39, *b, c, e, g*). The intermarriage of Neolithic and Mesolithic peoples often occurred, but still oftener, perhaps, the hunters learnt farming and pottery work from the newcomers, who found the native use of antler for sleeves and tools worth copying. Such fusions occurred in North France, one of which is probably seen at Le Campigny, where Mesolithic tools are associated with bag-pottery and stones for grinding grain. Behind many specimens in museums must lie fascinating stories of strange meetings of simple peoples, of suspicion turning to co-operation, and of tradition-bound tribes learning new ways of life.

Some Westerners spread to Morbihan before the arrival of the Megalithic mariners (p. 175), and others crossed the English Channel to lay the foundation of civilization in Mesolithic Britain—perhaps about 2500 B.C.

Cortailled Culture (Hawkes: 2500 B.C.; Childe: 2250 B.C.).—Other groups wandered up the Rhône Valley to the lakes of Western Switzerland, where they altered their habits and lived in pile settlements by the lake side. Their houses were built on platforms which were raised on posts as a precaution against



FIG. 39.—CLUES TO THE TRAIL OF THE BAG POTTERY PEOPLE

Map sites, 1, N.E. Spain; 2, Narbonne; 3, Bize; 4, Cortaillo; 5, Jura Mts.; 6, Camp de Chassey; 7, Michelsberg; 8, Fort Harrouard; 9, Morbihan; 10, Campigny; 11, Windmill Hill. *a*, bag ware; *b*, chisel-shaped arrow-head; *c*, bone arrow-head; *d*, antler hammer; *e*, polished stone axe; *f*, arrow-heads; *g*, bag ware; *h*, pottery spoons; *i*, finely incised ware of Chassey II; *n*, vase support.

floods. These, however, did eventually drown the villages very thoroughly, for nobody dreamed of their existence until the great drought of 1853, when the level of the lakes was so low that the posts of the platforms were exposed. Undisturbed by later settlements or the zeal of ignorant antiquarians, these villages reveal more of the life of these early ancestors of ours than any other known site. The Neolithic strata have been divided into three levels, and the interesting fact is that the earliest level, which is that of the bag-pottery people, shows the finest workmanship.

When the farmers first drove their flocks through the valleys to these lovely lakes they found woods down to the shores; so they had to fell trees to clear plots for tilling; but they did not waste energy in clearing a space for their villages. Instead of that, they used the logs lying around to make the large platforms and to furnish the posts on which their wooden huts were built. Perhaps they took the idea from Mesolithic folk who had already evolved this type of settlement. Certainly they were indebted to those natives for their chisel-shaped arrowheads, antler axes, hammers, picks, and the sleeves for their polished celts (Fig. 39, *b-d*).

While the men hunted deer with native or bone-tipped arrows, fished with traps or with nets weighted with grooved stones, or speared fish with harpoons, the women sat on the platforms spinning flax and wool without whorls, or weaving cloth and sewing it into garments. They also wove beautiful coiled baskets. Other women hoed the corn plots with antler or stone hoes, or planted wheat, barley, peas, and lentils. If certain stones are ploughshares, as their discoverer, Vouga, thinks, men may have taken a share in agriculture for the first time, since they used the plough.

Children gathered berries, plums, and apples as they tended the herds of cattle or the smaller flocks of sheep, goats, and pigs. Returning home in the evening with their leather bags full, they sat dangling their legs over the side of the platforms and threw the stones and pips into the mud, where, about 4,000 years later, they have been found. To throw refuse

below was the common practice, and there have been found also carbonized grains of wheat, bones, vegetable remains, and broken pottery. Careless folk dropped even their tools and trinkets, wooden spoons and combs, into the mud.

These people were well dressed in linen, wool and skin garments. Their favourite necklaces were made of small bones, though they also had some of ivory and wooden beads. Probably the hunters wore boars' tusks, and no doubt any one would be glad to own magical amulets, such as a round piece of bone from a human skull, or pendants resembling those of Predynastic Egyptians. They dressed their hair with wooden and bone combs. Behind them loomed a long tradition of "civilization," which is seen most clearly in their pottery, a fine red ware, hard as modern crockery because so perfectly fired. All the shapes, however, were of the simple old leather-bag tradition with lugs for carrying. Very few shards show signs of decoration (Fig. 39, *a*).

No burials are known, but the remains of two skeletons are enough to prove that these people were not round-headed, as was always supposed, but long-headed of the Mediterranean type. This agrees with the evidence of the migration from South France, while traces of their route are found in the Jura lake dwellings and camps.

This culture is known as Cortaillod, from a site on Lake Neuchâtel, and it spread as far north as the Rhine.

Michelsberg Culture (Hawkes: 2300 B.C.; Childe: 2000 B.C.).—This was allied to the Cortaillod culture but derived many elements from the Danubian. The Michelsberg people are the best known and most versatile of all the Western Neolithic groups, and are named after their fortified settlement, Michelsberg, overlooking the Rhine Valley, near Karlsruhe. They lived also in moor villages such as Weiher, near Schaffhausen in West Switzerland, where, on a peat island in the middle of boggy land, they built their two-roomed log huts on rafts of birchwood logs. Twenty of their houses have been found in a corduroy street, each with a floor of split oak trunks covered with mud plaster, and a log-paved courtyard. The

village was surrounded by a moat, outside of which was a timbered path. In some of their land villages as many as seventy-four houses have been discovered. At many places in Switzerland and on the Rhine they lived for security in pile dwellings.

These were obviously well-organized, intelligent people who adapted themselves to varying circumstances with considerable ingenuity, and they had sufficient power to displace many Danubian communities—as, for instance, at Goldberg, whence they drove out the warrior Rössen folk. They appear to have been strong for a long time, for they overran the Rhine area, penetrated to the Saale and the Elbe, thrust down to the Swiss Lakes, and overwhelmed the most westerly of the Danubians, the Omalians of Belgium.

Their hilltop fortresses are probably the most interesting of their settlements. This is undoubtedly true of the two most famous ones at Urmitz and Mayen, which were defended by trenches interrupted by causeways—like permanent draw-bridges. Those at Urmitz were strengthened by narrow wooden structures, which possibly were gatehouses. Opposite these entrances were gaps in the palisade, probably closed by gates (Fig. 40, *e*). This peculiar and unaccountable form of defence is found elsewhere only in our own Neolithic camps, such as Windmill Hill.

The dwellings were arranged along streets, and were of two types: one consisted of irregularly-shaped huts partly sunk, and the other of small rectangular houses on the ground level.

When a man died he was buried, with the funeral gifts deliberately broken, in the floor of his hut, which was then burnt. In Belgium cremation was adopted and the ashes were buried under mounds. Skeletons show that these were long- and medium-headed people. Probably they were as mixed as their culture.

Their handled jugs have a strong suggestion of the Danubian II ware of Jordansmühl (Fig. 26, *j*), and they used Danubian axe hammers, along with picks, antler sleeves, horn harpoons and tranchets, which were derived from Mesolithic cultures

(Fig. 40, *d, h*). Although their own culture was mainly Neolithic, they imported copper flat axes, awls, beads, and



FIG. 40.—THE MICHELBERG CULTURE

a, store jars, dipper, and bowls; *b*, baking plate; *c*, beaker (compare with fig. 9, *a*); *e*, plan of entrance to fort (compare with fig. 50, *a* and *b*); *f*, antler comb (compare with fig. 50, *k*); *d, h*, hafted flint tools.

even double axes. Such a mingling of cultures and races often leads to the development of a virile and enterprising race, as this undoubtedly was.

Their pottery is interesting and suggestive of many contacts.

The small ware, grey and black, is well made and decorated with applied strips and knobs of clay; but the large vessels are coarse. Most of this ware is still bag-shaped, but there are also globular jars, carinated bowls, dippers, saucer-shaped lids, and "baking plates" of clay which show impressions of mats, as well as Danubian handled jugs (Fig. 40, *a, b*). A most surprising vessel is the tulip beaker, which is exactly like only one other pot, and that is the Tasian beaker of prehistoric Egypt, used some 2,000 years earlier (Fig. 40, *c*) and (Fig. 9, *a*).

The bones of domestic animals are not so numerous as in Cortaillod sites, but those of game, including wild horses, increased, showing that hunting had become more important. The weapons were hollow-headed flint and double-pointed arrow-heads of bone, yew bows, and horn harpoons.

Fragments of flax and woven garments worn by these people can be seen in the British Museum. Although essentially Neolithic and self-sufficient, they traded for copper tools and beads and for flint and amber.

This culture is derived from that of Cortaillod and must have overlapped to some extent, for some of the earlier pottery was discovered in Michelsberg dwellings. It is thought to have lasted about two hundred years.

The versatility of these people is shown by their village of Spiennes in Belgium, which was given over to flint mining. This was a specialized industry and employed skilled workmen who cut galleries in the chalk to find the best seams of flint, thereby sometimes losing their lives, as is shown by the skeleton of a miner buried under fallen rock. This flint was traded over a large area. Antler combs found at Spiennes are exactly like those made by English Neolithic immigrants (Fig. 40, *f*, and Fig. 50, *k*).

Second Western Neolithic Migration.—While the first Neolithic pioneers were slowly developing their culture, later Neolithic folk with a culture rather different were advancing northward from the south of France. They also frequently mixed with natives, or passed their knowledge on to them, but to a much greater degree than the first farmers they broke

up into large groups with distinctive cultures. Their route is chiefly traceable by finds of their distinctive pottery, which was still of the leather-bag shape, though decorated with finely incised zigzags, squares, or triangles; the incisions were filled with white or red (Fig. 39, *l*). Less frequently stab-and-drag designs, applied knobs of clay or channelling, were used. This pottery suggests that these folk were less simple and isolated than their predecessors, the first farmers, for similar pottery styles were common in the Mediterranean islands and on Spanish ware. The grave-gifts of one man lead to speculation about the antecedents of his people and the contacts they made on their travels, for he had a bag-shaped bowl, a carinated and incised vessel, both chisel-shaped and leaf-shaped arrow-heads, a flint lance-head, calläis and serpentine beads, and rectangular schist plaques. The significance of these articles will be better understood when the next chapter has been read.

Little is known of these people as they wandered along the Aud and Gard Valleys, but some of them advanced up the Rhône Valley to Chassey, where they lived in the deserted village of their forerunners. There they developed specialities of their own, such as their well-known vase supports, some of which later reached Megalithic Brittany and the Channel Islands (Fig. 39, *n*). Chassey II is dated by Hawkes at 2250 B.C. and by Childe at 2100 B.C.

On the downlands of Northern France another group erected a fortified camp at Fort Harrouard. As a pastoral people they lived mainly on their flocks and did little hunting. Although they made good pottery and dressed in heavy woollen clothes, their tools were mainly of the Mesolithic type (Fig. 39, *m*). They are the only continental Western Neolithic people known to have made female figurines—a fact which needs elucidation. Although impressive Megalithic tombs were built near them, they clung to their own idea of grave burial within their fortified village. Baking-plates of the Michelsberg housewives were found in their homes. So, although self-contained, they were not isolated. This culture never reached England.

Horgen Culture (Hawkes: 2200 B.C.; Childe: 2000 B.C.).—After the floods which drove the Cortaillod and Michelsberg people from their settlements had retreated, many of the sites were occupied by the Horgen tribes. These folk were Mesolithic natives who had learnt Neolithic crafts, but their culture was a poor shoddy affair. They were content to use indifferent local flint, and their coarse pottery was so ill-fired that it now crumbles at a touch. They depended more on hunting than farming, and seem to have been a section of the old Mesolithic population which still lived on in Western and Central Europe and becomes noticeable to archaeologists now



and again when it was influenced by more progressive peoples and produced individual cultures, such as the Horgen or that of the S.O.M. in the Paris basin (see p. 183).

SOUTH-EAST ITALY

The surprising discovery of a large number of Neolithic (or later) settlements in Apulia has been made from an examination of R.A.F. war-time photographs. These "buried landscapes" are pictured and described in *Antiquity*, No. 80, 1946, and No. 90, 1949. Air photographs taken when the crops are growing show the areas of ancient sites as dark markings, for where the ground has been much disturbed the grain grows more luxuriantly.

The Apulia settlements appear as dark concentric rings. These are the broad ditches which once surrounded villages of

up to one hundred homesteads. Each homestead had its own circular ditch, enclosing a hut, storage pits, and probably cattle sheds. No fewer than two hundred village sites have been counted in an area of thirty by fifty-five miles. They could not all have been inhabited at the same time, since such a large population must have found it difficult to live off the land.

No site has yet been thoroughly excavated, but in 1949 a few test excavations and many ground surveys were made. An account of the peculiarly interesting results is given in *Ant.*, June, 1950. One village is probably the largest European Neolithic site known. From a study of their pottery Mr. R. B. K. Stevenson has detected three main periods, though the type of building remained unchanged throughout. The oldest ware was rough and covered with finger-nail or shell-edge impressions. This ought to provide a clue to the origin of these people, but in the present state of our knowledge it appears to suggest too many!

The next pottery was good, buff ware, painted with simple designs in red, suggesting a connection with Thessaly II peoples (p. 74). There were also burnished red or brown vessels with patterns scratched on them after firing. Somewhat similar pottery was made by the early prehistoric Egyptians (Amratians) and by the Chassey II people of France, who followed the first Western Neolithic immigrants.

The latest Apulian ware was of fine quality. It had painted meanders, spirals, zigzags, etc., and was probably related to the Thessalian II pottery.

The implements so far reported seem very inadequate for such a well-organized people. They are merely polished pebble celts, large roughly-flaked axes for digging ditches in the limestone, flint or obsidian knives, bone borers, spindle whorls, sickle teeth and saddle querns. No weapons, fishing gear, ornaments, or figurines have been found. So far as our inadequate knowledge goes, these folk are chiefly remarkable for the density of their population, but further study may reveal them as a link in the chain of Neolithic cultures that crept from the Near East to the Atlantic.

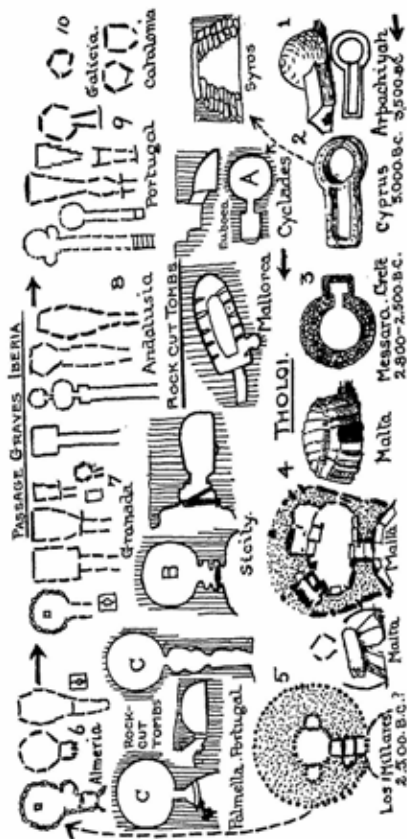


FIG. 41—PROBABLE LINKS IN THE EVOLUTION OF MEGALITHIC TOMBS

1-10, Evolution and varieties of passage graves: A-C, rock-cut tombs. Many rock-cut tombs and passage graves were contemporary and were alternative types of the same model.



CHAPTER XIII

MEGALITHIC CULTURE IN IBERIA

BEFORE describing the wave of culture to Iberia and the west, it will be well to glance at the world situation about 2600 B.C. The most impressive features were the general unrest and the movements of the peoples. These movements, however, doubtless appear much more rapid in retrospect than they actually were.

Troy II, a great fortress city, was the centre of a web of trade routes by land and sea. It sent merchants and prospectors up the Danube into Central Europe, across Asia Minor to Mesopotamia and Iran, and away over the Mediterranean to the great islands and fabled lands of the west. Mesopotamia was trading with the new and marvellous civilization of Mohenjaro in the Sind (India); and along the hard, almost impossible, route through Central Asia to China men were taking the art of pottery painting. Egypt was sending fleets of large, well-equipped sailing ships to the Red and Mediterranean Seas, and importing goods from many lands.

In Europe the old uniform Danubian culture was changing and breaking up into diversified groups with slightly varying cultures and with warlike tendencies. There was a widespread restlessness due, perhaps, to harrying and plundering by the forerunners of the warrior-pastoralists who, about this time, and possibly because of the increasing desiccation of their own wide grazing lands, were descending on the old civilizations, sometimes destroying, sometimes subduing, and often invigorating them. This caused much disruption and the dis-

persal of refugees who carried their culture to lands still barbarous (Chapter X).

The Mediterranean seems to have been navigated by the wooden sailing ships of many peoples. They clung to the safest and shortest sea routes, which each nation tried to dominate as it competed for the trade and magical products of the islands and coastal towns. Cycladic seamen took their idols to the Black Sea; others went to Crete and farther west. Crete herself was a first-class maritime power and seems to have had a finger in most sections of overseas trade. Malta's part is unknown, but the great and numerous temples bear silent witness to her proud influence. Sicily was the prosperous base and general meeting-place of sea adventurers, some of whom probably reached Spain.

The early Neolithic isolation had vanished. With trade went the exchange of ideas and customs as well as of material things, and the common use of metal gave men resources they had lacked before. For a time Malta and Sicily were the western outposts, but at last tales of the delectable land of copper mountains, or sheer adventure, lured men over the open sea until they reached the shores of Spain and entered the gate to the west and north.

While Neolithic peasants were moving across France, a very different wave of immigrants was following them—chiefly by sea along the Atlantic coast, but also across South-West France. They spread the Megalithic culture, of which the dramatic feature was the use of enormous stone slabs in building. The name, like so many others given in the early days of archaeology, is not accurately descriptive; for Megalithic builders (in the early days especially) not only built with huge blocks of stone but also used dry stone walling and made corbelled roofs. This culture was not the prerogative of one race or people; it was adopted by many. Its origin is still unknown, but clearly it was fed from many sources in the Mediterranean area, though it first developed as a distinct culture in Spain (Fig. 41). By that time it dominated the life of its adherents. From our distant point of view we can see only the material

results of its influence—chiefly the building of great communal tombs. To the people to whom it was introduced it must have meant something so vital, so powerfully compelling, and so bound up with their welfare that it was worth any sacrifice or labour to secure the benefits it gave.

It paid, too! Wherever the seafarers carried their great idea they ruled the local population and apparently prospered. Starting from Spain, intrepid adventurers sailed into the terrible unknown across the Bay of Biscay, across the English Channel, and eventually up the Irish Sea, along the dangerous west coast of Scotland, past the Orkneys, and away over the North Sea to Scandinavia. Apparently great migrations of people did not land anywhere; the supremacy of the cult appears to have been imposed by enterprising and determined bands of colonists. They were probably led by chieftains to whom was attributed some measure of divine power and influence, who themselves believed so strongly in their own form of magic that they could impress the natives of all countries to which they went with its great superiority and power. The magical element was doubtless enhanced by their skill and resourcefulness, their organization and general culture, which were so much higher than those of the people they influenced.

Perhaps it was not long after the establishment of the El Garcel folk that South-East Spain became the happy hunting-ground of wave after wave of adventurers from the Eastern Mediterranean who came seeking metals in one of the world's richest mineral areas. These prospectors probably hailed from several countries; nevertheless, living together, they managed to produce a remarkable culture which was amazingly original and yet retained many imitations or reflections of the culture of the distant homelands.

Spain appears to have been a small and early America about the middle of the third millennium B.C., a crucible in which cults and cultures impinged on one another, on the virile cave folk, and on the El Garcel immigrants or the large Mesolithic hunting population—with fertile, but very bewildering, results

for students. Again the cultural pattern is complicated by the fact that, as usual, the standard in the great trading cities was much higher than in the outlying districts, while in the mountainous hinterlands it became lower as the distance from the great centres increased. Moreover, none of the groups was stagnant; each moved—usually northward—and their routes are now being traced. It is no wonder that such a number of varied and interesting cultures, whose existence is known only from a few bones, tombs, pots, tools, and ornaments, should evoke opposing theories from the archaeologists who try to sort out the scrappy and often apparently conflicting evidence. Recent work, however, by Hawkes, Childe, and Coon shows an encouraging amount of agreement.

Some authorities believe that the Copper Age invasion of Spain, which introduced the Megalithic cult, was preceded by the coming of metal-using seamen who settled at Palaces, Campos Velez Blanco, etc., where they buried their dead in stone-walled trenches containing eight to ten bodies, in slab cists, or under round stone cairns like those of North Africa. They lived in fortified hill villages, hunted with leaf-shaped barbed and tanged or hollow-based arrows, and made bag-shaped pots with upright lug handles, ovoid pots, and double vases like those of Merimde (Fig. 42, *p-q*). Their necklaces were of callais, stone beads, or pectunculus shells, and they had crude flat stone idols of eastern type, copper celts, arrow-heads, pins, and awls. Other authorities look upon this culture as the result of an early mixture of El Garcel and Almerian Megalithic folk rather than as a distinct invasion.

There is no ambiguity, however, about the Megalithic invasion of Spain which took place about 2600 B.C. The earliest colony was Almeria—the first part of Spain to be seen by ships sailing from the east. There a large town was built among the pine-clad hills of Millares (Fig. 42, *a*). It lay a few miles from the coast and was the centre of an immensely rich mineral country where gold, silver, copper, and lead were easily obtained. The spur on which this city of twelve and a half acres stood overlooked a river, and on the wider ridge behind



FIG. 42—THE RICH CULTURE OF ALMERIA

a, plan of Millares; b, c, flint dagger and arrow-heads; d, flint halberd blade and arrow-heads; e, eye designs on pottery; f, stone crescent; g, gold coronet; h, ivory comb; i, ivory pin; k, cave type animal motives on pots; l, ivory toilet jar; m, button with V perforation; n, button of Sicilian type; o-q, early pottery; r, nest of pots; s, Almerian plaque "idol"; t, phalange "idol"; u, richly incised long bone "idol"; v, other types of "idol."

lay the cemetery. The oldest part of the town was thickly populated, but elsewhere the houses were in groups surrounded by open spaces. Ruins of the little bridge which crossed a ravine are still there, and even more surprising are the remains of an aqueduct which carried water from a spring in the hills to a cistern in the city. The neck of the spur was defended by a wall and a ditch, and forts on four adjacent hills gave additional protection. A hundred tombs of the wealthier citizens still stand, but little is left of their houses. The remaining dry stone walls show that the houses were rectangular, but some of the peasants lived in round, half-sunken wattle-and-daub huts. Their corn was kept in underground granaries.

The city must have resembled an eastern one in its well-organized community and the specialization of its artisans and workmen. Large numbers of miners extracted and smelted copper and silver, leaving slag heaps to testify to their labour. Natives or colonists washed gold from the rivers, and along the mountain tracks packmen or animals carried ore to the city or the waiting ships. In some of the narrow streets smiths hammered out copper tools and weapons—adzes, notched daggers with midribs down one face, West European daggers, saws, awls, and pins. There were goldsmiths, too, who made simple diadems and beads for wealthy folk (Fig. 42, *h*). Flint-workers, however, far outnumbered the metal workmen, and their work was superb. By wonderfully delicate and accurate pressure-flaking they made dainty arrow-heads of several types (Fig. 42, *c*), sickle teeth, and knives, and they even copied metal daggers and halberd blades superbly in flint (Fig. 42, *b*). Probably every home had a loom, and the thick plaques of clay, which are so often found, may have been loom weights.

How many of the luxury goods were produced in the town and how many were imported it is difficult to say. Certainly the ore ships returned with many articles from various distant ports, and these doubtless were copied by local craftsmen. Someone brought a peculiar ivory knob from Sicily or Troy,

and this was copied and carried far afield by the mariners (Fig. 42, *n*). From Africa came ostrich shells for vases and bead-making, hippo ivory for carving into daggers, little flasks, small pendants, long pins, and high combs (Fig. 42, *l, j, i*). Beads were of substances imported from far distant lands—jet (from Yorkshire?), callais (a green stone) from an unknown source, amethyst, turquoise, and even dentalium shells from the Red Sea. Most of the articles of daily use were based on types from the Mediterranean islands and countries. Travellers' tales as exciting as those of any later explorer must have been told on the quay, in the flickering firelight of the hovels, or round the chieftain-merchants' tables.

These were dark, lively folk of the long-headed Mediterranean race, but it is difficult to picture them as they moved about their city, because nothing is known of their clothing except the fact that it was fastened with buttons with V-shaped holes, and perhaps with bone pins which had grooved heads in imitation of twisted wire (Fig. 42, *f*). Most pins, however, were too large for personal use. High, carved ivory combs, almost exactly like those worn by Predynastic Egyptian women, held up the hair (Fig. 42, *i*). Sandals were certainly worn, for models in stone or bone to fit large or small feet have been found in tombs. Ladies treasured dainty little stone or ivory pots for toilet ointments or paint (Fig. 42, *l*, and chapter heading). The household pottery emphasizes the cosmopolitan character of this community. Much of it was based on the native bag pottery, plain burnished, but there were also bowls with tiny feet, globular jars with straight necks and strap handles, tumblers and even nests of several cup-like vessels fastened together—as in Crete (Fig. 42, *o, r*). Some pottery was decorated with knobs, comb prints, and incisions, or occasionally with green, red, black, and blue paint. The designs are often of great interest. Some are stylized figures of deer like those on cave walls; these are attributed to the "natives." Others are oculi (a magical pattern of two eyes with eyebrows), whose home was Troy (Fig. 42, *f*). Seven beakers or drinking vessels with bands of incised decoration have been found in

Almeria, but as they belonged to another people their significance will be dealt with later.

The large industrial population must have been fed by a considerable number of farmers, who grew cereals and olive trees and reared stock. Egyptian analogies are seen again in the sickles with flint teeth like those of the Fayum, and in their underground silos. Judging by the number of arrows found, hunting largely supplemented the food supply (Fig. 42, c). Everything in Almeria (as later elsewhere in Iberia) was dominated by the Megalithic cult which centred round the welfare of the dead. The wealthy merchants were powerful enough to commandeer the labour necessary to quarry, fashion, transport, and erect enormous slabs of stone for their tombs, or they were fortunate enough to have workmen skilled in building corbelled roofs and dry masonry walls. The less wealthy folk had to be content with crude imitations on a smaller scale of such tombs, while the humblest could anticipate burial only in a stone slab box or even in a cave.

The fact that many different kinds of tombs are found in Iberia has led to some of the hottest disputes of archæology. For a long time pundits delighted themselves by tracing an evolutionary series from the simplest dolmens to the elaborate tombs with large chambers and passages, or to the long galleries with side cells and forecourts, believing that the latter were the latest and the dolmens or cists the oldest. Greater knowledge has shown that this sequence is the reverse of fact. The simpler structures are probably the degenerate and late product of the elaborate tombs, or otherwise, as has been suggested, they were all that poorer folk could afford. Moreover, in country districts they were the best imitation that unskilled rural workmen could make of the grander buildings they had probably only heard of, and the chiefs naturally concentrated on the most essential feature—the burial chamber (Fig. 41, 7, 9, 10).

The finest and most numerous tombs in Almeria were large corbelled tholoi with entrance passages and side chambers (Fig. 43, a, c). These were evidently based on such structures

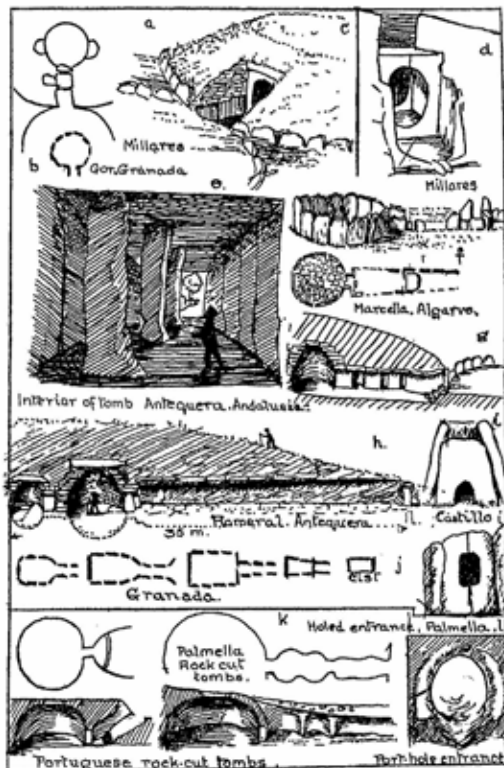


FIG. 43—SPANISH THOLOI AND PORTUGUESE ROCK-CUT TOMBS
d, i, holed slabs at entrance to tombs.

as the Cycladic rock-cut tombs, the Messara tombs of Crete, the tholoi of Cyprus, and eventually the tholoi of Arpachiyah. There are sixty-five tholoi in the large cemetery of Millares; the circular chambers built of dry stone walling vary from five to six metres in diameter. Often the interior was lined with stone slabs, plastered and painted, and pillars of wood and stone sometimes supported the corbelled roof. Occasionally, as in Malta and Crete, free standing pillars are found. They may have been supposed to embody a spirit.

The entrance passage was frequently divided into compartments by cross slabs, some pierced with "port-holes," as was the slab at the entrance (Fig. 43, *d*). These "port-holes" appear in Megalithic buildings of all ages and in many countries, and must have had a peculiar significance. In the Mastaba tombs of Egypt there was a small hole in the wall facing the statues of the dead for the convenience of the soul as it flitted in and out of its house, and through this it could communicate with the outside world.

In Almeria tombs were covered by round mounds, except for the entrance, to which several steps led down. The mound was encircled by a single or double ring of slabs, and often slabs outlined a semicircular forecourt which was probably the stage for funerary ceremonies or dances (Fig. 43, *c*). These great tombs were not for solitary burials, but belonged to families or clans, and they must have been used for long periods, the old bones being thrust aside to make room for the latest body. Often signs of very necessary purifying fires have been found, and it is possible some fires also had ritual value. Up to a hundred people were buried in one tomb, some skeletons often overflowing into the passage, and occasionally the skulls show a distinct family likeness. A variety of smaller slab-built tombs were also erected, and a few are rectangular or trapezoid cists with short entrance passages. There is no doubt that the same groups of people used several types of tomb, for the furniture is identical in each, except that corbelled tombs have the richest selections.

It is tantalizing to have emphatic evidence of a cult so awe-

inspiring that it gave its priests or leaders such a powerful hold over the people of many lands, and yet to understand it so little. Surely its adherents must have inherited a long tradition, though this cannot be traced to any single country; indeed, its cult objects seem to show influences from several distinct civilizations. Did its grip on the people lie in some strong, fundamental idea which appealed to the common thoughts and traditions of Mediterranean races and into which they could incorporate their own local magical cults, as the great religions of the East absorbed into their systems the cults of subjugated peoples? Malta was the nearest religious centre, and surely its influence, undefined as yet, must have been great, but the cult objects found in Iberia are most frequently copies of those of Troy, Crete, or the Cyclades.

Religion still centred round the Mother Goddess, though her images are not grossly fat like those of Malta, but are so stylized that it is sometimes difficult to recognize what they represent. They seem to be based on the owl-eyed faces of Troy (chapter heading). The favourite type at Millares was the painted or incised knuckle-bone of an ox, but the neighbouring towns preferred long bones (Fig. 42, *t, u*). The best are covered with finely-incised standardized patterns which always include the eyes. It is impossible to realize the beauty of the work from small illustrations. Two hundred figurines were found in fifty tombs, and fifty in huts, and so, remembering that excavators recovered only a tithe of the articles once used, it seems that most people owned an "idol." The typical "idol" of Portugal (Fig. 44, *a*), a flat schist plaque decorated with the suggestion of a face, an elaborate dress, and occasionally arms, has been found very rarely in Almeria, where the plaques are plain, except for a few incisions probably suggesting arms (Fig. 42, *s*). In the chapter heading quite a different form of the goddess is seen—of Cretan type.

Probably other cult objects were the flat stone croziers which, usually unornamented at Millares, are elsewhere covered with the same designs as the schist plaques (Fig. 44, *b*). It is rather surprising to find in some tombs bone or stone models of



FIG. 44—PORTUGUESE MEGALITHIC CULTURE

a, plaque "idols"; *b*, engraved croziers; *c*, button; *d*, ivory pinheads; *e*, cylindrical figurine; *f*, engraved and painted figure on slab; *g*, cosmetic pot; *h*, bracelet and beads of foreign type; *i*, gold diadem; *j*, Palmella beaker; *k*, handling bowl; *m*, Megalithic pottery; *n*, Portuguese bowls.

sandals. Did the dead hope that such models would help them to walk back to their homeland, as the Egyptian officials believed who died in the Sudan and had sandals buried with them? Some form of magic or good luck was associated also with axes, which were often worn as amulets. Probably callais, amber, gold, and precious stones were used more for the "power" that had become attached to them than for their beauty.

The Almerians were enterprising pioneers and, besides founding cities like Millares and Almizaraque, they spread along the south coast and through Granada to South-West Spain and Portugal. No doubt they were constantly reinforced by immigrants who heard in their homelands wonderful stories of this rich land of the setting sun.

After some time there were definite areas of colonization, each with its own peculiarities, but all sharing the same basic cultures. If new colonists brought eastern ideas with them, they were soon absorbed by the community and adapted themselves to its ways. The map gives an indication of the various areas and their cultures, but naturally there was much overlapping (back endpaper).

Granada.—Pressing westward, colonists settled on the high plateau of Granada, but their culture and wealth were inferior to that of Almeria. There were few corbelled, but many smaller cist tombs, often entered through port-holed slabs, in large cemeteries (Fig. 41, 7; Fig. 43, *f*). The funerary gifts were similar to the Almerian, but were poorer and less varied.

Andalusia (Fig. 41, 8).—A very different settlement grew up in the semi-tropical and very fertile valley of the Guadalquivir and the south-west coastal metalliferous districts. Seville became an important centre both for Megalithic and Beaker people. In this prosperous community a few families could build enormous tombs, and a surprising number were able to provide largish ones for themselves. In view of the lively controversy over the origin of passage (with chambers) and gallery graves (without chambers), it is interesting to find

that the people who built them had no scruples about using hybrid forms and, indeed, were sometimes satisfied with an intermediate type which might be a degenerate offspring of either. Corbelling and slabs were used for the same tomb; chambers became pear-shaped and faded off into the passage, or the square chamber was little larger than the passage. In a few of the large tombs the enormous roofing slabs were supported by pillars (Fig. 43, *e*); the wonder is that any tombs were built without them. Some tombs were half-excavated in the hillsides, and others were covered by huge circular mounds. Five minutes of imaginative thinking, helped by articles such as those in *Antiquity* (1928, 1938), will give a faint idea of the planning, the time, and the labour needed for the erection of these everlasting houses of the dead. Plans and elevations give no idea of the overpowering effect of a buried structure built of slabs as large as the wall of a room and roofed with slabs the size of an average ceiling. Fig. 43, *g, h*, is an attempt to portray the interior (sections) of some of these tombs. To mourners, following the bier with flickering lamps and torches casting fantastic lights and shadows into the grim darkness, it must have been immensely awe-inspiring and impressive.

Recently, rock-cut tombs which imitated that of Romeral have been found near Antequera. Such tombs have hitherto been regarded as typical of Portuguese culture.

Before long the fertile coastal districts of Portugal were well populated, and another large trading city rose at Alcalá in Algarve with a cemetery of fine tombs (Fig. 43, *f*). Here as in Andalusia there must have been frequent contact with Almeria, for the culture is very similar, though tomb-building was more varied. The poorer tombs show all stages of degeneration down to simple dolmens and cists.

Palmella (Fig. 41, *C*).—Around the great centre of Palmella on the Tagus estuary fortified hill-towns with large cemeteries grew up at important traffic junctions. From the ports seafarers set sail for the north, and arrived in Brittany and the British Isles. It is interesting to note how the settlers gradually

lost touch with Almeria as they moved farther away and developed peculiarities of their own. For some reason they burrowed into the hillsides when tomb-making, and all stages from the mound-covered passage or gallery grave to the rock-cut tomb can be traced (Fig. 43, *k, l*). The two types were never antagonistic in the Mediterranean area, and both were often used by the same people. The similarity between Portuguese and Sicilian rock-cut tombs is so close that it is tempting to see a migration of aristocrats from that island (Fig. 41, *B, C*).

The settlers in Portugal considered the possession of idols a matter of great importance. The knuckle-bone type of goddess was little used, but plain marble cylinders, often incised with eyes and bands, were popular (Fig. 44, *e*). Flat schist plaques, richly incised, were apparently treasured by most of the colonists. On a few of these plaques (the earliest?) a face and hands are clearly shown, but soon the dress became the important item (so that a projection with suspension holes for eyes betokened a face), and many were merely decorated rectangular plaques. The dress designs, with their patterns of squares and zigzags, their flounces and shoulder-bands or yokes, were so stereotyped that they surely must have had some significance (Fig. 44, *a*).

Crozziers, incised with the same designs, were also buried with the dead (Fig. 44, *b*). Nearly all these "idols" were too large to be worn comfortably, the average being from six to eight inches in length. Possibly they were hung in the houses, as Russian ikons are. It is curious that they cannot be traced to other countries. It might have been expected that the mixing of nationalities in Iberia would lead to a multiplication of deity types, but the three varieties described were apparently developed in Iberia and adopted by fresh colonies.

Copper was scarce in Portugal and was used only for small weapons¹ (Fig. 45, *g, h*), but great numbers of hollow-based arrow-heads of flint (rare in Almeria) were made. The fangs of those of Alcalá are so delicate that it seems incredible that they

¹ Recently sheets of copper have been found at S. Pedro, Portugal.

could have been flaked (Fig. 42, *e*). Equally beautiful are the flint halberd blades, some of which were actually polished to imitate metal more closely (Fig. 42, *d*). Polished stone axes were common—in contrast again to Almeria (Fig. 42, *e*). Marble models of hafted hoes were placed in some tombs, and also model shoes and large thin crescents of limestone similar in shape to the gold collars of Ireland, but without suitable holes for suspension. These folk seem to have delighted in small carved objects in marble or ivory. Apart from the beakers, the pottery is severely plain, sometimes bag-shaped, but usually carinated with deep, straight, or slightly hollowed sides and with small handles (Fig. 44, *m*).

Glimpses of seafarers from the East are given by beads of Sardinian type, knob buttons like those of Sicily and Troy, and segmented stone beads, while ivory rings and beads tell of trade with Africa. Amber probably came from the Baltic; but the source of callais is unknown.

It is interesting to see how then, as now, with increasing distance from the great centres of civilization the people became increasingly poorer and more rustic. In the hinterland of the Tagus estuary villages managed to retain sufficient contact with the towns to procure a few cherished idols, callais beads, etc., and to build slab tombs in imitation of tholoi—painting or engraving on them Mother Goddess symbols—and even to possess copper daggers. Away in the remote wilds of Galicia polygonal dolmens with small entrances were the only substitute for tholoi, and the grave goods were meagre and poor (Fig. 41, 10).

East Spain.—While Portugal was being colonized the Almerians were extending their influence up the east coast of Spain. Along the Ebro Valley and to Catalonia the settlements must have been few and small, and they had little influence on the natives, who made their own traditional "cave" pottery and usually buried their dead in trenches and caves, with a very meagre outfit for the next world. They had acquired, however, Almerian arrow-heads, stone axes, callais beads, and a very few copper tools. An occasional beaker

suggests that stray Beaker people came, but found little scope for trade.

Although such a long stretch of coast was neglected, South Catalonia became another large and busy centre in contact with Almeria and was populated by a medley of people. Here were Megalithic passage-graves under round cairns, gallery-graves, bottle-shaped tombs, dolmens with polygonal chambers and a short passage, and, simplest of all, the stone box open at one end. In the same area lived people of El Garcel culture whose custom it was to use closed stone cists. As neither people seems to have had watertight traditions, they apparently mingled their ideas, as no doubt they mixed in marriage. Hawkes thinks that this fusion led to the creation of a very popular type of the segmented gallery-grave, in which the gallery is divided into compartments by slabs or sills—like a series of cists end to end. This became the typical Pyrenean form, though single cists and very poor imitations of classical type were sometimes built. Caves were still used for burials and for homes, and the cave people must have held their own with the newcomers, for much of their pottery has been found.

The Pyrenean culture extended over the whole range, and was similar on both sides. Although the country was mountainous and difficult, it was so rich in copper that prospectors were attracted to it and trade was brisk. The number and variety of the gallery and passage graves, dolmens and cists, and grave goods are evidence of the diversity of colonists and their contacts with other settlements in Iberia and abroad. Needless to say, to such a thriving industrial community Beaker traders eventually came and doubtless increased its prosperity.

In the north Pyrenean district and in South France west of the Rhône, lived the greatest concentration of gallery-grave people, and their tomb architecture was strongly influenced by the immigration of Sardinian chiefs, bringing the tradition of the Sardinian giants' graves. From this centre the gallery-grave people (or ideas) spread north and eventually reached the British Isles. There seems to have been some mingling of

cults or fashions even in South France, for although gallery-graves were normally built with slabs and covered by long cairns, some near Arles were cut out of the rock, roofed with slabs, and covered by round cairns. Passage-graves nearly always had round cairns (as in Iberia), but a few had oval or egg-shaped cairns, and these are of special interest because of their possible relation to the enigmatical Cotswold long barrows.

The Beaker Folk.—These mysterious but influential people are believed by most archaeologists to have originated in South or Central Spain through the stimulation of Almerian culture on a group of cave folk, who forthwith were inspired to fashion a new and delightful kind of drinking cup, copied from vessels of esparto grass (Fig. 45, *a-d*). From these centres they branched off to Palmella, Catalonia, and elsewhere where the metal trade was good. Then they travelled across France to the Rhine and into Germany. Fleure would reverse this process and bring them from East Galicia or the Ukraine to Spain, where they flourished exceedingly in a congenial environment and produced some of their beautiful ware. Fleure's argument is that if they had travelled out from Spain they would surely have taken some Megalithic ideas with them. Although burial in Megalithic tombs was their custom throughout Iberia, they were quite ready to adopt the burial practices of other countries to which they travelled.

The comparatively rapid spread of these folk over all kinds of countries, in which they often became the dominant force, is difficult to account for. Like the Jews, they settled wherever trade could be carried on, but they had no homeland. The maps show that beakers are found plentifully in mineral centres or at the junctions of trade routes. International trade in those days was a great adventure. Probably most journeys were done by relays of travellers; even so, courage, endurance, and planning were needed. Besides minerals the traders carried magical substances like amber, gold, callais, and precious stones, and yet for defence they had only bows and arrows and daggers.



FIG. 45—BEAKERS, PLASTIC WARE, AND COPPER TOOLS

a-d, richly engraved Beaker ware; e, plastic ware; f, distribution of pottery and alternative migration routes of Beaker people; g-h, copper tools and weapons.

In whatever diverse directions they went they kept their culture amazingly similar, so that beakers from Central Europe can almost be matched in Spain, although some local variations developed. Perhaps the potent liquor they drank from the beakers had much to do with their hold over so many peoples. It would be a magical as well as a pleasant potion. Another form of magic often practised was trepanning—the removal of a piece of bone from a living skull in order to let an evil spirit out.

The decoration of their pots is often very beautiful, and it ought to give a clue to the origin of the potters. Childe and others see the likeness to the pot-like baskets of esparto grass which were made in North Africa, the Sudan, and by the El Garcel folk, and more faintly to the incised Tasian "tulip" beakers, while Fleure believes that they were derived from painted pottery and were made by people who had lost the art of painting. One strange analogy is very striking. The designs on the bottom of the bowls from Spain are very similar to those on the beautiful painted plates of Arpachiyah of 3000 B.C. If they were nearer in time and space the connection would seem certain—unless both are based on similar basket ware.

So these thriving Beaker folk wove their way through half of Europe, opening it up and carrying the knowledge of trade in metal with them everywhere during the Copper and Bronze Ages.



CHAPTER XIV

A MEGALITHIC ¹ METROPOLIS

THE colonization of Iberia, far from satisfying the Megalithic mariners' thirst for adventure, seems to have lured them on farther. While they hugged the coast they were fairly safe, but venturing their little ships across the Bay of Biscay surely tested their seamanship and courage to the full. Yet they seem to have accomplished it easily, for the greatest concentration of monuments, and that most closely related to Iberian tombs, lies round the Gulf of Morbihan and the neighbouring isles, which (with Jersey) were then probably joined to the mainland.

The coast of France farther south was colonized chiefly from Morbihan and has relatively few Megalithic monuments. Morbihan offered excellent harbours for the shelter of ships, and the open country was attractive to farmers, while prospectors probably discovered gold, tin, and perhaps callais in the rocks which provided such excellent material for their massive tombs. Gradually the coastal districts became well populated, indeed almost crowded, with an amazing number and variety of Megalithic and humbler tombs. Very little is known of the life of the hardy, purposeful people who erected them, for, like the Egyptians, they built temporary houses for the living and

¹ The term "Megalithic" is used to denote any article, custom, or people connected with the Megalithic magic or "religion."

everlasting houses, as they hoped, for their dead. These were all founded on Iberian tradition, but were adapted to local material, planned from fading memories, and probably erected by local men who lacked the skill of the Iberian expert worker. Therefore, though the tombs constantly recall Iberian (chiefly Portuguese) prototypes, there are many poor imitations and variations.

As in *Ibèria*, several types were built simultaneously by people who used the same pottery, ornaments, tools, and weapons, and held similar ideas about religion and funerary ritual. The early leaders, who must have been men of considerable force of character, had passage-tombs for their family vaults, such as the fine one at Kercado, where the simple tholos plan is adapted to a building of huge slabs (Fig. 46, *a*). The round barrow was carefully constructed according to correct ritualistic formulæ. It had an ashlar retaining wall, which splayed out to form a forecourt with a massive slab-framed portal in the centre and a great slab on each side of it. Running round the barrow was a pathway of closely packed stones, bounded on the outside by a wall of slabs—except opposite the forecourt. Exactly over the burial chamber, but on the top of the mound, stood a tall stone (*menhir*) like a sentinel keeping guard over the castle of the dead. Of the mystic rites which took place in the forecourt only a trace remains in the two hearths and a recumbent slab on which offerings to the dead or the guardian deity were perhaps cooked and presented. On the *Ile Longue* is a similar slab-walled tomb, but here a finely corbelled roof covered the burial chamber, which was once probably five metres high (Fig. 46, *b*). The round barrow had three retaining walls of increasing height built into it.

At La Hogue, Jersey, there is an impressive and awe-inspiring example of a passage-grave containing an elongated chamber with side cells and (an unusual feature) one at the end.

Less powerful families had to content themselves with rather poor imitations of the real thing, and probably, as later generations lost touch with *Iberia*, they were not so fanatical about the correct formulæ and ritual. Only a few tombs had corbelled

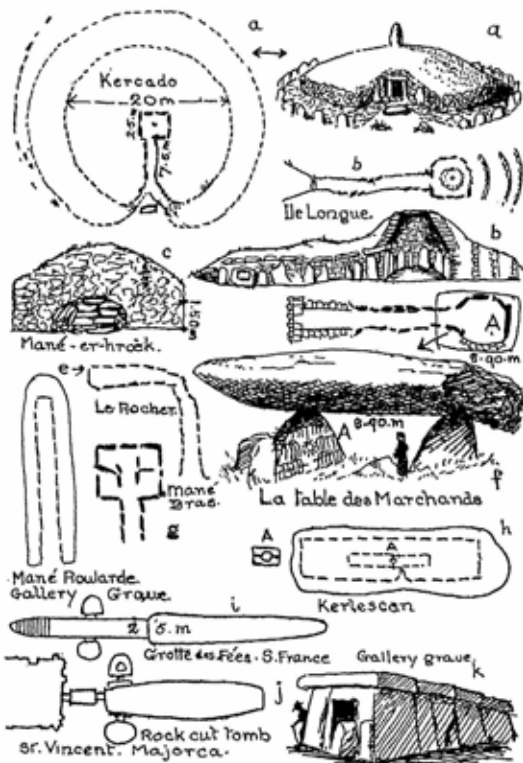


FIG. 46—FRENCH MEGALITHIC TOMBS

a-f, passage graves, Brittany; e-h, gallery graves, Brittany; i, k, gallery graves, S. France; j, rock-cut gallery, Majorca; g, transeptal grave.

roofs; most had walls and roofs of Megalithic slabs, many of which were so enormous that it must have taken dozens of men months to quarry, transport (probably by gangs of men pulling with hide ropes along rollers), and erect the finest tombs.

The distinction between the passage and the chamber was almost lost in many tombs, as at Gavrinis where the chamber is only a little wider and higher than the passage. The whole is 15 m. long, and is richly decorated with intricate carvings in amazing profusion, surely giving immense satisfaction to the most magic-ridden chief.

True gallery-graves are rare; so apparently the gallery-grave folk made little impression on this concentration of passage-grave people.

Some tombs, cruciform in plan, had side cells at the far end and are of special interest because they may be the prototype of the long barrows of the Cotswolds (Fig. 46, *g*).

A curious and, perhaps, late form of tomb was the angled or L-shaped gallery (Fig. 46, *e*), which in Poulguen, Finistère, was divided into compartments. In many angled tombs a peculiar design resembling an octopus was carved on the tomb slabs (Fig. 47, *m*).

Most puzzling are the "closed" tombs in which massive rectangular chambers without entrances were buried in large tumuli. At Mané-er-Hroëk the tumulus is 100 m. long and covers a square chamber of huge slabs placed horizontally and roofed with cap-stones (Fig. 46, *c*). On one side is a fine carved slab. Other tombs of this class have a number of small cists round the central chamber, and all contained rich funerary offerings—especially fine greenstone axes (Fig. 47, *h*). Successive burials could hardly have taken place in these tombs; so it may be that their builders belonged to a special "sect," though the carvings show that they held the same basic religious ideas as their collective-burial neighbours.

The old desire for a rock-cut tomb had not died out and a few such tombs were dug in the softer rocks. Ordinary folk were buried in stone cists either under small tumuli or sunk into the ground; some were even interred in trench graves or in caves.

Apparently these merchant venturers had eastern ideas about class distinctions and established themselves as aristocratic priest-chiefs over native populations, who probably gave ready obedience to strangers possessed of such strong magic, for magic rather than war seems to have spread Megalithic imperialism.

Though people from north, south, and east mingled in Brittany, there is no sign of warfare. Stone double axes and spherical and discoid mace-heads point to the Mediterranean; collared flasks, cord beakers, an amber bead, and bored hammer-axes prove contact with the Baltic; some motives for the carvings in the tombs came from the Paris basin, while the fine, long, pointed ritual greenstone axes (too thin for use otherwise) were exported to Iberia and Britain. Unfortunately none of these things were found in stratified deposits; so we do not know how many of them were in use at any particular time.

One dominant element in the mixed population was the Beaker folk. Exactly what part they played is uncertain, but, as usual, they adopted the local cult, were admitted to (or dominated) the best family circles and were buried in the finest tombs. Certainly they were not the mythical "Megalithic race," for megaliths were built before their arrival. Their drinking cups are found in most types of tombs, except the corbelled ones of Morbihan and Jersey; but pottery associated with other late arrivals is there too—e.g., flat-bottomed goblets from the Paris basin, Chassey vase-supports along with channelled ware from South France, and the distinctly Breton ware (low carinated bowls with vertical ribs on the neck) (Fig. 47, d).

As so few stratified sites are known, it is impossible to disentangle the early story of Brittany completely, and it is well to remember that only the later grave goods are likely to have been preserved, since earlier ones were treated with scant ceremony by undertakers. The Megalithic culture was introduced while Spain and Portugal were still being colonized, and it was soon carried to the British Isles. It lasted a long

time, beginning, perhaps, about 2300 B.C., but it kept its predominantly Neolithic character—probably, as in Malta and South France, through priestly influence—long after Bronze Age culture was spreading around it.

Finistère was definitely a provincial centre of Megalithic life, and the tombs are inferior to the best at Morbihan. The passage-grave is rare, but gallery-graves are very numerous. Some of the tombs are enormous, but there is little design, and the construction is such that it could be the work of unskilled men, using brute strength rather than intelligent minds. Carvings on wall slabs are very much less frequent than in Morbihan.

Our knowledge of the Megalithic builders is as meagre as their tombs are overpowering, and it comes almost entirely from objects buried with the dead. As most tombs were robbed long ago, the few remaining articles must give a very inadequate impression of the wealth and skill of the people. The "closed" tombs, however, have not been rifled, and so many oddments have come from the others that imagination has a little material to play with. Although very few metal articles have been recovered, it is evident that gold and copper were used. Rich folk wore beads and hammered gold or copper bracelets with interlocking ends, and fastened their clothes with gold hooks. The men had gold slips on the butts of their weapons. Copper was rare, and the few copper daggers and flat axes were the work of unskilled craftsmen. Transverse or tanged and barbed arrow-heads were used, but very few of the Neolithic leaf-shaped type.

The Morbihan folk had a positive passion for callais beads, at least five hundred being known, and these must be but a fraction of those commonly worn. Surely they were considered by this strange community to be pregnant with magical power, as were the ceremonial greenstone axes.

The fact that beautiful flint work like that of Iberia is not found in Brittany proves that wholesale movements of population did not take place.

Perhaps the most fascinating feature of the Breton megaliths



FIG. 47—THE MOTHER GODDESS AND FRENCH
MEGALITHIC POTTERY

a-c, bag pottery; d, common Megalithic pottery; e, beaker and channelled ware; f, flint arrow-heads; h, large ceremonial green-stone axe and normal axe; i, axe amulet; j-r, Mother Goddess figures; n-n, stone slab from Ile Longue as photographed by Rouzic and Breuil; o, from S.O.M. tomb; p, from Aveyron, S. France; r, menhir from Guernsey.

is the carving which so often occurs on the wall and roof slabs. Certainly it was not there for ornamentation, for sometimes it can hardly be seen and often it is without decorative value. Only rarely does it give a rich and satisfying effect as in the amazing tomb at Gavr'inis, where slab after slab is covered with intricately carved patterns. The designs were undoubtedly magical, though it is impossible to say exactly how they were supposed to act.

Many of them are obviously derived from the Mother Goddess symbolism, but others have received varied interpretations. A common type is often called a "buckler," but it merges into another which resembles an octopus (a Cretan motif), though Breuil interprets it as the Mother Goddess. He has recently photographed the slabs, and claims to have found an enormous amount of detail which previous photographs did not show (Fig. 47, *n*). As he reproduces these carvings they can surely claim to be super-surrealist productions! From buckler and octopus outlines the goddess emerges covered with the most fantastic shapes, many of which resolve themselves into faces. Even the sculptor of the highly conventionalized carvings of Gavr'inis has left a few patterns showing clearly heads and semicircular necklaces (Fig. 47, *l*). Most of the other designs seem to be based on the necklace. Why this should have had such importance it is difficult to say, but it seems to be the last element in the symbolism to survive.

In Aveyron, the Paris basin, and the Marne all degrees of stylization from queerly realistic menhir figures to the abstract symbol of breasts and necklace can be found, and in Guernsey are menhirs (probably late) roughly carved into human form with the same type of breasts close together (Fig. 47, *q, r*).

Another and probably late symbol of great importance in Breton megalithic tombs is the axe, which Rouzic, the eminent authority on Megaliths, sees as a hoe. It occurs on the underside of the huge capstone of the Table des Marchands (Fig. 46, *f*) and above it are the legs of an ox. The triangular slab at the end supporting the capstone is covered with bent lines in the midst of which is the sun. This Rouzic interprets as a field of

corn bending to the wind with the sun shining over it, and the whole a tribute to the deity, or, more likely, a form of sympathetic magic for the benefit of the tribal crops.

How far the dead chief was believed to influence the lives of his people is unknown, but it is unlikely that such labour as massive tomb-building would have been undertaken unless the tribe believed that they gained some benefit from it.

Human feet are sometimes carved on slabs or made into pendants, recalling the model shoes in Iberian tombs. There are many other figures, some of which defy interpretation. If we could but read these symbols, the whole story of the strange gripping religion of the Megalithic builders might lie before us. Wherever the mariners went they cherished the same designs; they appear in Irish passage-tombs, and echoes of them occur even in North Scotland, for however much their rites and architectural ideas varied, there was a fundamental belief behind them which was shared by all.

A new archaeological map of France shows that before the Bronze Age dawned Neolithic peoples were living along the seaboard from Calais to the Basque area, and already large provinces were being linked with each other by trails which centuries later the Romans made into roads.

S.O.M.—Probably a late form of Megalithic culture is the *S.O.M.* (Seine-Oise-Marne) culture, which straddled across the old Megalithic province, dividing the Chassey from the Michelsberg group. The people who practised it inherited traditions once prevalent in the south of France, where men from the Pyrenean area, who brought the custom of segmented cist burial, mingled with Sardinian or Balearic chiefs, who built long galleries for tombs. The gallery-grave (82 feet) of Grotte des Fées is one of a group of similar tombs derived from the rock-cut tombs of St. Vincent, Majorca (Fig. 46, *i, j*). From the south of France such tombs spread up the Rhône Valley to the Paris basin. There Megalithic or (occasionally) dry-walled galleries, 23 to 50 feet long, were being built in trenches (Fig. 48). They were entered through a short, narrow ante-chamber which had a port-holed slab leading to the burial

chamber, where there might be as many as two hundred bodies in layers separated by slabs. The cult of the Mother Goddess was strong among these folk, and her symbols, a U-shaped necklace and breasts close together, were carved on many tombs (Fig. 47, *o-g*).

Cemeteries of rock-cut tombs of the Mediterranean type were excavated in the soft rock of the Marne Valley by people akin to those of the Paris basin. The best tombs were entered by a sloping dromos or ramp which led to the antechamber and the vaulted rectangular burial chamber. Port-holes in recessed slabs were at the entrance to the tomb and the chamber; often, guarding the antechamber, was a conventionalized

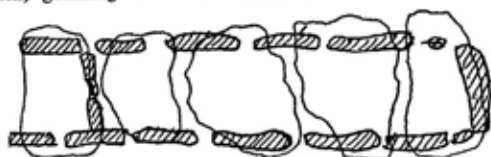


FIG. 48—PLAN OF A S.O.M. TOMB

figure of the goddess carved or drawn with charcoal on the wall (Fig. 47, *o*). In these tombs the offerings were rich and the burials few, but the majority of tombs were rough and crude imitations, and were crowded with corpses of humbler folk, who received only poor funerary gifts.

These people were very mixed and included a large number of round-headed folk. They were chiefly Mesolithic hunter-pastoralists, probably dominated by warrior Megalithic chiefs. On the other hand, Horgen splay-footed jars suggest that early Neolithic farmers played some part; and even the Danubians infiltrated so far, leaving their trade-mark—spondylus shell bracelets and a few pots. The articles used in daily life were Mesolithic—bone and antler tools, antler sleeves, polished flint axes, and chisel-shaped arrow-heads, along with a few leaf-shaped ones. The pottery was mostly plain, ugly, and coarse.

With the tomb cult from the south of France had come the ritual of trepanning holes in the skull, and from the number of holed skulls found in the Paris basin it appears to have been a fanatical craze. So great was this demand for magical discs of bone that dead skulls were operated on to obtain them. Another curious fashion was introduced—that of cutting a T-shaped incision in the scalp across the sinciput.

This queer superstitious society seems to have flourished for a long time and sent out branches to Brittany and the Channel Islands.

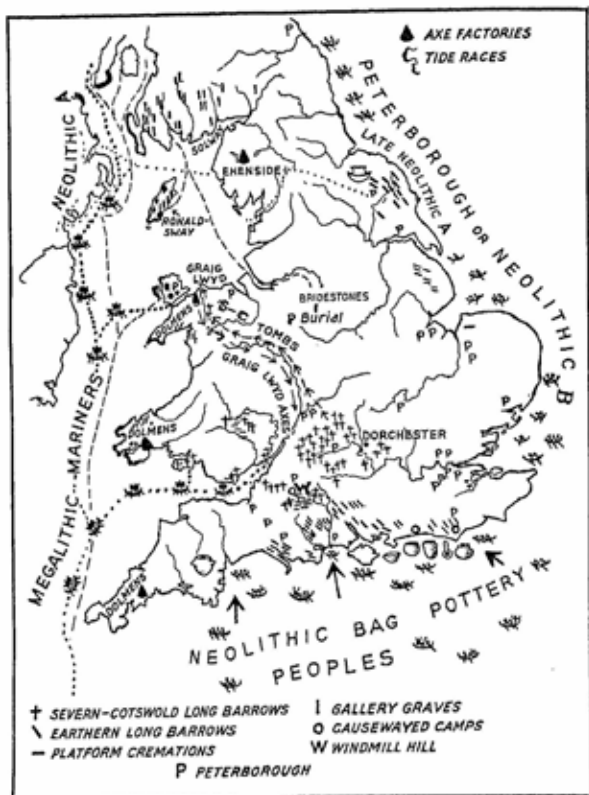


FIG. 49—DISTRIBUTION OF NEOLITHIC CULTURES



CHAPTER XV

ENGLAND AWAKE

THE landing of William the Conqueror fades into insignificance compared with the landing about 2500 B.C. of a company of small slight dark-haired men and women who drove the first domestic animals ashore and dumped leather bags full of corn seed for the first time on English soil. Small dogs barked, men shouted, boys ran here and there to keep the frightened beasts from stampeding, while women stumbled up the shingle with their dark shiny pots, and children carried their fathers' leaf-shaped arrow-heads in leather bags. Some women hurried forward with heavy stone saucer-shaped querns, and, shaking corn out of a bag, ground it with a bun-shaped stone and kneaded flat cakes out of the flour. Meanwhile, children gathered firewood, hungry babies cried, and women milked the small restive cows. As the flat cakes cooked on hot stones the men gathered round the fire, after hauling up the heavy wooden boats, and with sighs of relief everyone settled down to eat and looked wonderingly at the heavily forested country around their new home. So "civilized" life started in England. The blood of those pioneers still flows in the small dark long-headed folk of parts of Western Britain. They were our forefathers, remote and very crude, but still an aroma of magic clings to their burial mounds, so that these are now "giants'" graves.

The ghosts of the chiefs buried in these mounds were thought to have the power for good or evil over their clansmen, and that

power still lingers, so that it is said to be unlucky to pass their tombs at night, and women desiring children seek their life-giving magic. Indeed, so great was the magic attributed to these barrows that Christian priests found that the only way to combat the superstition was to attach the sanctity of Christianity to them by building a church or a cross on the spot. So the continuity of reverence remains unbroken for over 4,000 years. Much of the thought and reasoning of these Neolithic people has filtered down through the centuries to become legends and superstitions, to some of which modern people still cling.

Out of the darkness of the past our ancestors creep forth, slight forms claiming a cooking-pot from the shelf of a museum or an antler pick from a flint mine. Dim ghostly processions steal over the Downs to the tomb which overlooks half southern England; echoes of laughter and chatter and the lowing of cattle linger round their wind-swept camps.

Despite the voluminous literature concerning these people, little is known of their life or thought. They were simple, peaceful peasants, who grew barley in small plots, but depended for food chiefly on their herds of large horned cattle (the size of our six months' old calves), their numerous pigs which rooted among the trees, and their few sheep and goats. Small dogs helped the children with the herding. Because of the lack of fodder, many lambs and calves were killed off before winter. These peasants ate horseflesh but probably hunted wild horses. Wherever they went they sought easily tilled soil in the more lightly wooded country on chalk, limestone or gravel, away from clay, dense forests, and marshes. In those days the Downs¹ and the Cotswolds were covered with trees, but Neolithic man felled them with his stone axes and fire, while his cattle and pigs dealt with the new shoots and undergrowth. Although preferring the higher land, he adapted himself to a varying environment, provided the soil was suitable. In Essex he lived on what is known as the Lyonesse, land submerged later by the marine trans-

¹ The shells of moisture-loving snails in Neolithic strata prove that the spring line on the Downs was higher in Neolithic times than now.

gression, and about the same time he settled on the edge of the fens in Cambridgeshire. At Abingdon he camped on a low tongue of gravel by the Thames.

An unusual settlement was that by Ehenside Tarn (now drained), near St. Bees, where a group of six huts formed a lakeside village and the farmers had boats on the lake, as the discovery of a wooden paddle reveals (Fig. 51, *m*). In many places it seems that each family or group or clan staked out a claim for itself on a piece of land. Each spur of the Cotswolds, for instance, has its long barrow, and each strip of beach in the Clyde-Galloway area has a cairn or two. Some tough folk built little villages on Dartmoor, and others at Carn Brea in Cornwall set their huts amid boulders for shelter and surrounded their village with a wall, while in the Mendips, the Peak District, and the Vale of Clwyd the settlers did not despise caves. They made at least two types of huts: rectangular wooden ones above ground, and others half sunken and irregularly shaped.

The best-known Neolithic sites are circular causewayed camps, so called because the encircling ditches or trenches are blocked at intervals by causeways of undisturbed chalk. These vary from ridges a foot wide to broad causeways over which cattle could be driven. The material from the trenches formed a bank which sometimes, at least, was crowned with a palisade (Fig. 50, *a, b*). Windmill Hill is a typical camp, and its name has been adopted for the earliest Neolithic A culture. Other large camps are at Whitehawk, Brighton, Trundle, Goodwood, Abingdon-on-Thames, and Hambury in Devon. About a dozen are known. A curious feature of these camps is the small area of the central enclosure compared with that of the rings.

Many theories have been advanced to account for these peculiar structures. They were obviously the work of organized groups who were prepared to work hard and long for a common cause. The camps made poor defensive works, offering too many entries to an enemy, and some are set lop-sidedly on a hill. It has been suggested that the camps were



FIG. 50—WINDMILL HILL OR NEOLITHIC A CULTURE

a-b, ditches and causeways, Windmill Hill; c-g, pottery types; h, leaf-shaped arrow-heads; i, axe; j, serrated flint; k, antler comb; m, probable hafting of scraper; o, mace head.

cattle kraals with many entrances for the convenience of herdsmen; but let any one who fancies such a theory try to drive cattle over the numerous narrow causeways of Windmill Hill! The only plausible theory seems to be that the trenches were, as they appear to be, quarries for obtaining material for building the embankment, which was continuous except opposite the large causeways. It has also been suggested that the people came from a country where they were accustomed to build stone walls round their camps and that is why the trenches are deep and narrow. They were seeking large lumps of chalk which were some distance below the surface. The trenches are very irregular, as though the men dug deeply and widely where they found the best chalk. Probably a wall of chalk lumps was erected, the soft upper chalk filling in the crevices and being piled on the outer side, where it could not slip back into the trench. Each group of men dug sufficient material for their section of the wall and left a ridge between themselves and the next gang's trench.

Having excavated deep steep-sided trenches, why not live in them? It would have been easy to turn them into good shelters by means of a sloping roof of branches and turf from the bank to the opposite brim of the trench; but so far no traces of wood have been found. Nevertheless, all the hearths and articles found by excavators are dug out of the debris in the trenches—the two inner rings at Windmill Hill. Some of the inner trenches are only wide enough for two people to pass and about three feet deep, but the second ring has wider trenches five feet deep, and the third ring trenches very much larger—as much as eight feet deep. So evidently a high wall surrounded the camp. Perhaps there were wild beasts to be kept out as well as cattle to be kept in. Why so many rings were made is a mystery. Did they separate their herds of cattle, sheep, and pigs? There does not seem to be evidence that any of the areas were cultivated, and potsherds, etc., are not found in them. Possibly these camps were used only at certain seasons, perhaps the autumn, when the herds were rounded up before the winter slaughter began. It is supposed

that much of the meat was salted; but where did the salt come from?¹ Probably the people fed heavily for a while and then relied on their hunting until the spring.

Whitebank camp has four rings of ditches, and in the first ring two people lived amid squalor, bad smells, and refuse. Bodies were found in the same trenches as hearths, but whether the living and the dead were there at the same time is unknown. Human brain-pans found among the debris lying near hearths hint at cannibalism, but it is possible that they were used as scoops or as vessels with the usual disregard for any human bones other than those of the chiefs and their families. These probably had an odour of divinity, as the welfare of the tribe may have been linked with their magical power. The bones of a child in a hole made for a tall and solitary post point to child sacrifice or a sanctified spot.

A great number of Neolithic skeletons have been examined and they reveal an appalling wastage of youth. As in India today, many children died, and the death-rate between twenty and thirty was particularly heavy, while few reached old age at forty. Only the strongest could survive the insanitary conditions, seasonal food shortages, and exposure to the wet climate of those days. The first seeds of civilization, like those of religion, were sown in unsavoury conditions, but, nevertheless, some grew strong and healthy.

These mysterious camps have a few Continental parallels—chiefly the Michelsberg camps of Mayen and Urmitz (Fig. 40, e). As those were probably not built until after the Neolithic people had settled in England, they cannot be the prototypes of our camps. They were obviously defensive, but the English camps give a totally different impression; nor is there anything else to show that the Windmill Hill people resorted to war, their only weapons being bows and arrows and maces. As the Michelsberg and Windmill Hill people have much in common, is it not possible that they sprang from common ancestors, but divided to specialize each in its own way—the Michelsberg

¹ See *Proceedings of the Prehistoric Society*, 1948, for primitive methods of preserving meat.

people adapting the causewayed camp for war, and the Windmill Hill folk for herding? The size of the camps implies that a considerable number of people and their herds inhabited a camp at one time.

It is surprising to learn that no certain signs of spinning or weaving have been found among English Neolithic remains, though their distant kinsmen on the Continent left whorls to prove their skill. So perhaps our ancestors dressed in skin and leather garments. For leather dressing they had innumerable flint scrapers and some very peculiar long combs cut out of antlers—exactly like those of the Michelsberg site at Spiennes (Fig. 50, *k*, and Fig. 40, *f*).

Their lack of ornaments is also surprising. Only a few stone beads, discs, and very rough pieces of bone and chalk perforated for suspension are known. Hæmatite has been found in several tombs and was probably used for painting bodies. The remains at the Ehenside lake-settlement show that these people were better carpenters than we suspected, for a stone axe with a well-shaped wooden handle, a wooden paddle, a trident (for fishing?), a bowl, and club were found there (Fig. 51, *k-n*). Their flint saws, curved knives, sickles (with lustered edges due to cutting corn), and leaf-shaped arrowheads are well and often beautifully made. They also ground and polished with great skill and precision stone hammers, maces, and axes—no easy task.¹

The women made fairly good pottery and, as it was copied from leather bags, they were perhaps expert leather workers. Piggott has studied this pottery carefully and divided it into typical styles, which are so constantly referred to in archaeological literature that it is worth while to memorize them (chapter heading). The simplest baggy bowls (A-C) are the earliest Neolithic I (Fig. 50, *c*). The carinated bowls, Neolithic II (D-J), imitate leather bowls stretched by withy hoops kept in place by stitches, which are realistically represented on pots by oblique strokes (Fig. 50, *f*). Types G-J have the

¹ Fine collections of Neolithic flint implements may be seen in the attractive museums at Brighton and Lewes.

rim rolled over (club-rim) as though a withy hoop was stitched in the top of a leather bag, stretching it and thereby forming a neck (Fig. 50, *f*). These dark-coloured pots are hard and well baked and often burnished, but a coarser ware was also made. A-C types were plain, but the others often had a simple, restrained decoration of comb or finger-nail impressions on the shoulder, and pricks (made by bone pins) under the rims. Sometimes the women drew their fingers gently on the wet clay giving a pleasant faintly wavy effect. Pottery was precious, since broken pots were often mended by boring small holes in the fragments and lacing them together with thongs. It is interesting to see how difficult most women found the modelling of a symmetrically shaped pot. Illustrations are apt to smooth down irregular contours.

The women had little initiative, but they had some good taste and skill and possibly despised the coarse over-decorated ware made by the other Neolithic invaders, the Peterborough folk. They seem, however, to have been stimulated to decorate their own pots rather more after contact with the new-comers, as at Whithawk camp.

Such detailed research dealing with pottery may seem a waste of time, but what finger-prints are to the detective today, pottery is to the archaeologist, and may be as valuable in tracing the personality, contacts, and wanderings of the people who made it. So far only gossamer-like theories can be formed, based on similarities with Continental pots. Hawkes and Piggott believe that there were three separate invasions of Neolithic folk. The first from North France brought people who made A-C bag pottery, which is found in the lowest levels of Windmill Hill. A later and probably larger invasion from farther north brought carinated pots remarkably like Cortaillod and Belgian Michelsberg ware; however, as they do not include such distinctive shapes as the tulip beakers and baking plates, it seems as though the potters parted from the ancestors of Michelsberg folk before they reached their full development. The antler combs and the clay spoons of English Neolithic culture point in the same direction (Fig. 50, *l*). The carinated

pots are found in Yorkshire, at Windmill Hill (second level) and to the east of it, but not in Dorset or Devon, where there are plain bowls with peculiar large lugs pierced horizontally and expanding at the ends like trumpets (Fig. 50, e). These trumpet lugs are found also in Brittany, and Hawkes suggests that they were carried to England by people who also brought the tradition of burying their dead under long earthen mounds. Childe, however, rejects the idea of distinct invasions, but thinks that new-comers infiltrated from several quarters, bringing slightly different ideas which in the isolated communities of England tended to crystallize into exclusive types.

Like their Continental kinsmen, Windmill Hill people specialized in flint-mining and knapping. The miners sank many shafts, twenty to forty feet deep, into the chalk to get at good seams of flint, and then dug a network of galleries along the seams. Their only implements for quarrying were picks of deer antler stripped to the tine, antler rakes, and (for shovels) the shoulder-blades of oxen (Fig. 51, p-r). The picks were inserted as wedges, hammered into the chalk, and then used as levers to push out the flint nodules. The finger-prints of the miners can be seen on some chalk-smearred handles, and squared chalk pillars are smoothed by the rubbing of their bodies. The small, dark galleries in which the miners crouched were lit by cup-like chalk lamps filled with fat and wick, and the smoke left black smudges on the walls. It was often dangerous work, as the skeleton of a miner buried by a fall of rock shows. Dr. Curwen gives an excellent story and some pictures of the Neolithic A Cissbury mines in *The Archaeology of Sussex*.

The old filled-up mine shafts were used as workshops from which axes, adzes, and arrow-heads were exported to far distant villages, this being the only trade known to have been undertaken by Windmill Hill folk, apart from the importing of stone for axe-making, in late Neolithic times.

The most startling evidence for long-distance barter of axes comes from the wind-swept moorlands above Penmaenmawr in North Wales, where the "factory" grew so large that the

debris covered the hillside. The hard stone here was on the surface—Graig Lwyd rock. Perhaps the Windmill Hill folk who first found this precious site traded axes locally only, but it is certain that the Neolithic B, or Peterborough, people carried them over mountains and moorland, woodland and forest, marsh and river, up to Scotland, and right down to South Wales, the Cotswolds, Wessex, and even Essex and the Isle of Wight.

From a microscopical examination of stone axes now being undertaken it appears that even more popular than Graig Lwyd axes were those made from rock found between Bowfell and the Langdale Pikes in the Lake District. These axes were carried to the Midlands, Oxfordshire, Wessex, the Dorset coast, Brecon, Yorkshire, the Isle of Man, and Scotland.

It is even thought probable that a few axes from Kent, Dorset, and Gloucester are of Antrim rock, and certainly Antrim axes have been found in Western Scotland. As a number of the axes examined are chance finds it is not known how many are of Neolithic date. It is clear, however, that a few axe factories exported their ware over long distances.

Peterborough or Neolithic B People.—While Neolithic A folk were settling in southern England, immigrants from the Baltic were making the perilous crossing of the North Sea and sailing up the numerous creeks and rivers of the east coast, which then stretched far into what is now the North Sea as a series of marshes and sandbanks. The newcomers leisurely explored these grand hunting-grounds, and then moved inland until some of them made contact with Neolithic A folk. Later, along with the Beaker folk, they reached Anglesey, Ulster, and Scotland. These people were the descendants of Mesolithic hunters who, having learned the essentials of Neolithic life, developed a common culture right across Northern Europe. With smaller herds and little agriculture they were not tied to the open uplands as the Neolithic farmers were; so they could live in the lowlands along the well-stocked rivers and coastal marshes. Their huts were lightly-built structures with sunken floors—a type suitable for semi-nomads. As they



FIG. 51—NEOLITHIC A AND B POTTERY AND TOOLS

a, Neolithic B ware and its decoration; *i*, top-sided arrow-head; *k*, *l*, *m*, *n*, Ehenside paddles, fish-spear, and axe; *p*, shovel-ox shoulder blade with antler axe handle.

wandered over the country they seem to have combined trade with hunting, probably bartering stone, flint, and antler for farm produce. Their greatest venture was the carrying of Graig Lwyd axes from North Wales to the south.

The women made a coarse badly-fired pottery, over-decorated in a haphazard way with a profusion of impressions made by the end of a small bird's bone, a loop of whipped cord ("maggot" impressions), a shell edge, a coarse comb, or a finger nail (Fig. 51, *h*). The shapes were nearly all deep bowls with a constricted neck, suggesting a carrying cord. (See *Antiquity*, September, 1929, for pictures of the surprising variety of patterns which can be made with the end of a small bone.)

Little is known of the equipment of these people, except that they used curious lop-sided arrow-heads, horn or stone mace heads, and curved flint sickles (Fig. 51, *i, j*).

It is surprising to find that such folk exploited the flint mines of Norfolk, such as Grimes Graves, and conducted a considerable trade in the axes made on the spot. The miner's life and even some of his thoughts and emotions have been laid bare by Mr. Armstrong's diligent excavation of the numerous shafts and galleries. The miner's temper gave way when his antler "picks" broke, and he flung them aside in anger. When a gallery was worked out, the picks used were piled in it. Was it unlucky to use them for another? The most intimate side-light on the mind of these men was found at the bottom of a shaft opposite an unproductive gallery. There the hard-working disappointed men built a triangular "altar" of chalk rubble and on it piled antler picks and a chalk phallus. Opposite to it they made a chalk pedestal on which they placed a very crude chalk figure of a fat pregnant woman carved by the cleverest of their mates. Near this a fire was lit, and maybe some offering was burnt before the enthroned goddess who, as they fervently hoped, would produce fertility in mines as they believed she did in human beings, animals, and vegetation. As that was the only sterile gallery in the mine, it seems as though their faith and labour were rewarded.

The Isle of Man.—The Isle of Man deserves a word to itself. The sea-mindedness of Neolithic and Megalithic peoples is demonstrated by the number and variety of their relics on this island. Bann people's flakes and tools, Megalithic tombs, and some Neolithic pots have been known for some time, but recently exciting discoveries have brought to light a culture unknown elsewhere.

At Ronaldsway, near Douglas, are the remains of a large oblong Neolithic house (24 feet by 12-14 feet). It was sunk in the ground about two feet, and had timber or wattle-and-daub

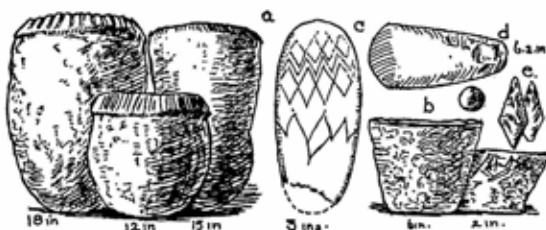


FIG. 52—RONALDSWAY CULTURE, I.O.M.

a, Neolithic A pots; *b*, bucket-shaped pots; *c*, incised schist plaque; *e*, arrow-heads.

walls with posts at intervals. An inner ring of posts further supported the roof. As one end of the floor was higher than the other and contained all the family's possessions, as well as the sunken central hearth, it is suggested that cattle may have been housed in the lower portion, as in the old long houses of Wales. Rarely are so many vestiges found of the life of the inhabitants of a dwelling. They were farmers with a preference for beef and especially marrow, but apparently they had no use for fish. As they left behind their implements, as well as food in the larder, they probably fled hurriedly, but no one seems to have followed them there. Near their peat-filled hearth was a hole covered by a slab and containing ox-bones

jointed as in life, and a pot which doubtless once contained liquid. Large stones and slabs may be the ruins of their benches and tables (as at Skara Brae).

They had numerous implements—small flint axes and chisels, awls and scrapers, concave saws, polished flint knives, and rhomboid arrow-heads. They pecked and polished hard stone pebbles into serviceable axes. These tools resemble most nearly those from Scotland and Yorkshire; but their crude pottery was made in a style of their own. Deep bag-shaped jars look like Windmill Hill "milking pails," but they have deep bevelled collars stuck on (Fig. 52, *a*). Such jars had previously been found at Glencrunchery and other parts of Ireland, but it was not known to which culture they belonged. With these bag-pots at Ronaldsway are squat flower-pot jars of quite a different type (Fig. 52, *b*) which are not associated with Neolithic A pottery elsewhere.

The climax of this excavation was the discovery of five small schist plaques with incised diamond or zigzag patterns which might have come from Spain. Nothing like them is known elsewhere in the British Isles. If they had been found in a Megalithic tomb it would have been surprising, but in the house of these strange Neolithic people they create one of the fascinating puzzles of archæology (Fig. 52, *c*).

Other Neolithic Manx customs were highly original and perhaps were initiated by the Ronaldsway people. Deep bag-pots covered with slate slabs and sunk into the earth near the surface are common in the island. Some held cremated bones, but others were empty, and it is suggested that they were used for seasonal offerings.

Megalithic tombs in the island are also extremely interesting—especially that of Cashtal-yn-Ard, near Maughold,¹ where everything points to a well-developed faith and a complex ritual. Prof. Fleure suggests ceremonies that may have taken place there and the meaning which lies behind Megalithic religion.

¹ *Antiquaries' Journal*, 1936.



CHAPTER XVI

GIANTS' GRAVES

OUR Neolithic ancestors made a permanent impression on the English landscape wherever they piled up long mounds or barrows, like crouching lions, over their dead chieftains. Some are known as "earthen" barrows, because they are now solid mounds of earth, without stone chambers, though there are often traces of turf or wooden structures inside them. They were deliberately planned and carefully constructed, and have many features in common with the stone-chambered long barrows.

The earthen barrow of Thickthorn Down, Dorset, had two turf walls enclosing chalk rubble at one end; these may have protected skeletons now decayed. Three post-holes found on the causeway once held posts which were not structural and were, therefore, probably ritual—perhaps corresponding to standing stones. In this barrow a stone phallus and Neolithic A and B pottery were found.

Under the centre of the immensely long Holdenhurst barrow is a mound of sand and turf which probably covered burials, and near is a "ritual" pit full of burnt flints, while the remains of the funeral fires lie around. Here too is evidence of Neolithic A and B peoples.

The Wor barrow, Cranbourne Chase, was surrounded by

interrupted quarry ditches, and the rectangular mound was carefully upheld by a wooden palisade, each post of which was fixed firmly in a trench with flints. The builders had first placed the bodies on the ground between rows of stones covered with sods, and then piled the huge barrow over them. Excavators who dig away these great mounds sympathize with the labourers who had to build them.

The careful planning and immense amount of work the Neolithic people put into their tomb-building is well shown by the late earthen barrow at Skendleby, Lincolnshire (Fig. 53, *o*). There the great mound, two hundred feet long, had a wooden palisade along each side, and at the front the chalk was cut away to leave a curved wall on which a log façade was erected. Down the centre of the lower half of the mound a long fence of hurdling with many offshoots was erected for some unfathomable purpose. A large quarry fosse surrounded the mound. The eight people in whose honour this monument was raised were laid on a platform of chalk surrounded by small boulders and covered with turves interspersed with seams of black material containing Neolithic A sherds and flint chips. Some distance behind was the mysterious ritual pit. Was it simply a coincidence that eight posts were put in a row at the end of the tomb? Or were they connected with the eight dead?

A fundamental difference between the earthen and Megalithic long barrows is that the latter were built to be reopened for successive burials, while it is difficult to see how the former could be reopened when the mound was finished.

Probably the people who used them practised reserved burial—i.e., the burial of the bones after the flesh had decayed. Was the death of a chief the signal for a general interment of himself and the dead of his family under a great mound?

The numerous Yorkshire barrows, like those of Lincolnshire, are later than the southern ones, and reveal many interesting and new customs. Several are in pairs, some are round (not long), and some hold cremations. How many of the cremations are accidental is a disputed point. That of Grimsthorpe

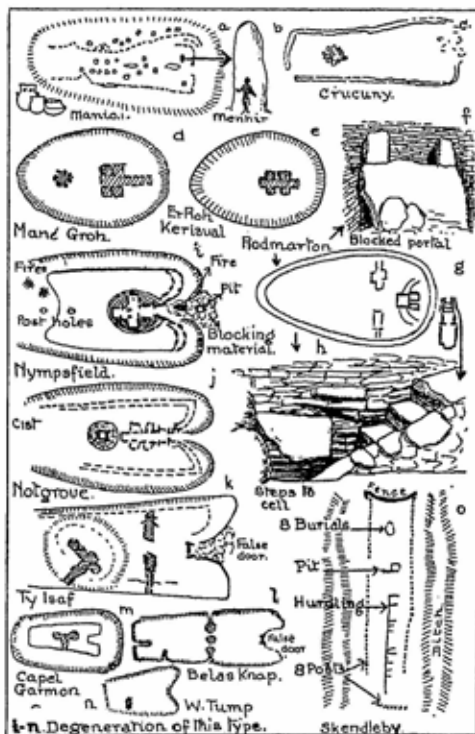


FIG. 53—LONG BARROWS

a-e, Breton long and oval barrows; f-n, Severn-Cotswold long barrows; f-h, Rodmarton; f, entrance, g, plan showing oval retaining walls of mound, side cells, entrance and court-yard walls; h, plan of side cell with steps; o, plan of earthen long barrow in Lincolnshire.

has been described as a cremation in a wooden hut or in a flue-like wood-lined trench, but opinion has now veered round to the theory that the funeral fires got out of hand! A few simply constructed long barrows in Wessex and one in Norfolk probably covered cremations on platforms of flint and turf.

The distribution of earthen barrows may throw some light on the controversy which rages over their origin. All the southern ones lie on the chalk of Dorset and Sussex, and those of Sussex are near the causeway camps, but not near the flint mines. The map does not suggest that they spread from the stone barrows of the Cotswolds, but from the south coast with a focus on Salisbury Plain. Yet it is claimed that they are simple copies of the Cotswold Megalithic tombs, built in earth, turf, and wood in districts where stone is not available. However, West Kennet long barrow, in the middle of the chalk Downs, has stone-built chambers! Moreover, in North Wiltshire and Yorkshire stone is not lacking, yet earthen barrows were built there. Hawkes and Piggott believe that Neolithic A people brought the tradition of building earthen barrows from Brittany before the Megalithic builders arrived. At Manio there are a few long oval barrows which show the following similarities to the English ones: the general shape, a retaining wall (but of stone), a dome-like structure in the centre covering a ritual deposit, and a standing stone at one end (in England posts). At Manio the dead were deposited in cists placed irregularly under the mound, but at Crucunyn the tradition of burial at one end of the mound only had been introduced (Fig. 53, *a-c*). The pottery in these barrows is like our Neolithic A ware (Fig. 50, *c-g*) and quite unlike the Megalithic Breton ware (Fig. 47, *d*).

The Severn-Cotswold Barrows.—One group of Megalithic immigrants sailed down the Bristol Channel and settled in Gower and the Vale of Glamorgan, Brecknock, and along the Mendips and Cotswolds. With the good stone of this area they erected immense long barrows with forecourts, containing passage-tombs of slabs or dry walling or, as at Nympsfield and Uley, slabs and walling alternately to form panels. They first

used a tomb plan like that of a long cruciform church with two or more transepts. Only eight of this type, however, are known, for later generations soon slackened their building methods and Fig. 53, *i-n*, shows the result. Outward appearances were preserved, for huge mounds were still made even when the chambers were merely cells built into the side (Fig. 53, *g, k-n*). Why the sides rather than the ends were used is a mystery, unless it was to deceive the tomb robbers, for this did not save labour, and the east end usually was still the most important part of the whole structure, where the portal and forecourt were constructed with the greatest care. At Rodmarton (Windmill Tump) the portal slabs were eight feet high, and the builders, not satisfied with closing the entrance with a large slab, placed a still greater one, nine feet high, leaning against the jambs, and supported the underside with stone walling (Fig. 53, *g*). In the enclosed space the remains of a sacrifice (bones of horse, ox, and pig) were found.

The curved dry stone walls of the forecourt were often beautifully constructed of thin tile-like slabs of nearly uniform size. Several barrows have two retaining walls to support the cairn, one behind and the other at the front (Fig. 53, *i, j*), and occasionally these walls go completely round (Fig. 53, *g, j*). There is no doubt that vital funerary ritual was carried out in the forecourts with burnt sacrifice, and probably dancing and magical ceremonies. Yet in most of the tombs the door was false (Fig. 53, *k, l*), and the forecourts were carefully hidden beneath the rubble blocking them which conformed to the shape of the rest of the mound. The false doors may have been for the use of the spirit, like the false doors so beautifully painted on Egyptian tombs, but they also were blocked with slabs or dry walling. Perhaps this was to keep robbers out, while for the spirit the semblance of the real thing was sufficient.

Recent excavations at Rodmarton have shown that interment sometimes took place from the top of the barrows. There excavators found two and three steps leading down to the port-holed slabs which give entrance to the chambers, and the port-holes were actually filled with the carefully fitted

walling put there by Neolithic man—the only case of its kind known in Europe (Fig. 53, *g*, *h*). Some Portuguese tombs were also entered from above.

Port-holes are rare in the British Isles, though they occur in all types of tombs. There are none in the 1,500 Scottish tombs. What is the significance of their very limited distribution in Europe? They occur in Iberia (Fig. 43, *i*), the Paris basin, and Sweden, but in Brittany only four are known, and very few in South France, which was such an important stepping-off point for migrations. Here is a line of research for inquiring minds.

If port-holes are scarce in British tombs, many other devices for restricting the entrance were used. The high transverse slabs placed across many tombs make it an unseemly and uncomfortable procedure to scramble and squeeze through to the burial chamber, and very difficult to drag a corpse through (Fig. 56, *j*). In some tombs the door jambs are so close together that only a ghost could be expected to pass through them. A great deal of Neolithic thinking lies behind this apparently absurd convention, and still more behind the widespread custom of putting white pebbles in or on the barrows. Such pebbles have been put on graves ever since, though today no one knows why. Our Neolithic ancestors could have supplied the reason.

Burnt offerings to the dead or to the guardian deity have been made by most primitive peoples, and Neolithic tombs show that fires were lit in forecourts and chambers; but there is always the possibility that the purpose was to purify the air. At Nympsfield fire seems to have been used everywhere, and there is a continuous ring of burnt material against the edge of the barrow. Even before the tomb was built ceremonies with fire sacrifices were performed on the chosen site.

It is interesting to find that exactly the same treatment was given to men, women, children, and even babies, if they were of the right social class. At Lankill experts see a family likeness among the skeletons of four men, a youth, a woman, an old woman, a child, and a baby.

As devotees of the Mother Goddess these people probably inherited through their mothers, and, indeed, they probably lived under a matriarchy. So little trace of the Mother Goddess is found in England (only very few roughly carved lumps of chalk) that it is exciting to learn that some of the scratches on a slab in the south chamber of Rodmarton are tentatively interpreted as the round eyes and beaked nose of that important person.

A puzzling feature of the Manio mounds is the dome-like structure in the centre. Similar round structures in stone have been found in several long barrows and seem to have a special significance. At Nympsfield the chambers are enclosed in a solid dome of masonry (Fig. 53, *i*). The extremely interesting barrow of Notgrove (*Archæologia*, LXXXVI, 142) has a dome of large stones faced with dry stone walling of small slabs and protected by a ring of large slabs lying against it (Fig. 53, *j*). In the centre is a stone cist in which a well-made individual of between fifty and sixty was buried. On the top of this dome were the bones of a girl of eighteen. Yet the main burial chambers were quite separate and led to a fine forecourt on which fires had been lit, pigs, oxen, and a horse sacrificed, and a young adult and a small child either sacrificed or buried before it was blocked up.

Every long barrow has a different and most elusive story, and gives hints of important ceremonies and complex ideas with a strong tradition behind them.

"Dolmens" are either the ruined remains of large tombs (chapter heading) or the attempt to build a burial chamber by people who had either lost touch with the full Megalithic tradition or lacked the means or skill to erect anything better.

Visiting long barrows may seem at first a disappointing experience, for often they appear only as lumpy green mounds with hollows where the soil has been thrown back after excavation. Sometimes a cell is half visible, or a few stones project from the grass. Sometimes the mound has vanished and the stone slabs stand in position, or have fallen, as at Nympsfield.

Uley barrow, near Stroud (with a glorious view over the Severn Valley), and Belas Knap barrow, above Winchcombe, overlooking the Gloucester Plain, are very impressive. They have been excavated, discreetly repaired for safety, and left open. To enter them with an expectant imagination is to enter into the world of our ancestors vaguely but surely. If one stands—perhaps in a puddle—in the candle-illuminated darkness of Uley barrow and tries to sketch the side chambers as the water trickles down one's neck and splashes on the paper, before long Neolithic men will appear and, with much hard labour and no little skill, build their everlasting house before one's eyes. In one corner they fill in the space between the slabs with small slabs overlapping so that they curve—the beginning of corbelling. Who taught them to chisel off the top corners of their wall slabs, leaving a triangular space to be filled in with dry stone walling? It is said that this technique gives a strong support for the huge roof slabs. Certainly in Spain tomb-builders used this device. After crawling out, one gazes with due respect at the size and weight of the massive block over the entrance, which, if it had been insecurely placed, would have fallen thousands of years ago.

And it is good to sit in the sun, facing the thin curved façade and dummy entrance of Belas Knap, and puzzle over the mentality of these crude, inartistic people who so valued symmetry that they split their stones into thin slabs, like evenly cut slices of bread, and laid them so skilfully that their work has never been surpassed in all the long and fine tradition of Cotswold stone walling.

If few sites now show interesting relics, it is, nevertheless, a stimulating experience to travel over the Cotswolds and see the situation chosen for the tombs, and to ruminate over the life of their builders. Most of them are on magnificent viewpoints, but not all, as is sometimes stated. The complex long barrow of Rodmarton has a very limited outlook, and those of Avening are on the side of a small valley.

It is well to ponder over a map and, remembering the swampy and forested condition of the low lands, trace possible ways by

which our ancestors travelled from their landing-places on the Bristol Channel to South Wales, the Cotswolds, and right along the chalk Downs, where they built monuments that have so deeply impressed generations of British folk.

To enter into the thrill of the unravelling of Neolithic life it is well to read such a story as the account of the excavations at Rodmarton given in the *Proceedings of the Prehistoric Society for 1940* (p. 178), or the tale of Whitehawk Camp, so well told by Dr. Curwen in the *Archæology of Sussex*. An occasional close-up of the hunt for our ancestors does more to bring them to life than the reading of congested accounts of centuries—such as this! It also reveals the fascination of the archæological game, which to outsiders so often seems as dry and lifeless as the cairns themselves.

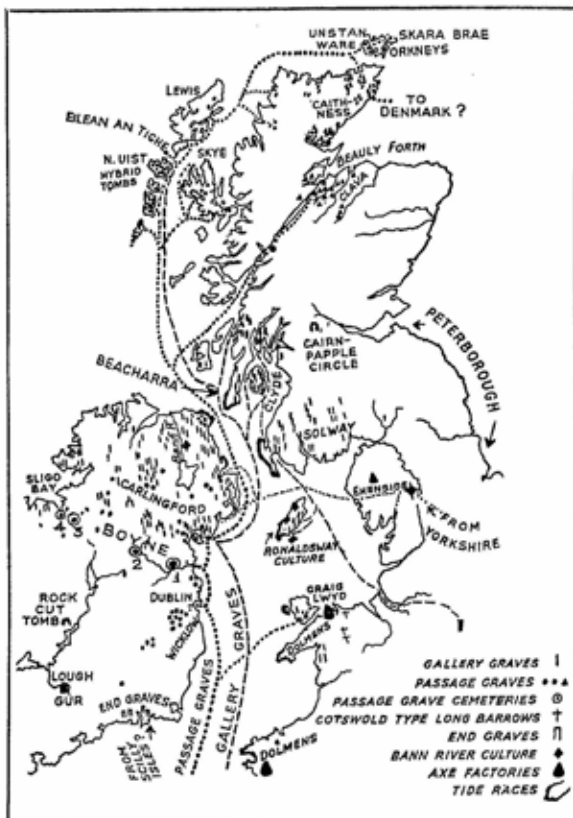
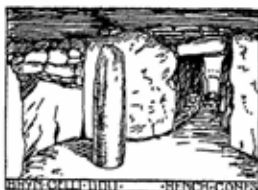


FIG. 54—DISTRIBUTION OF PASSAGE AND GALLERY GRAVES



CHAPTER XVII

MEGALITHIC MARINERS

The Boyne Group.—Generally speaking, Ireland had a much more distinguished introduction to civilization than England, for towards the end of the third millennium B.C. there came to her shores chieftains and their followers from the Copper Age cities of Iberia. They sought open land and light soil for farming, kept a look-out for metals, and had a preference for limestone hills like those they left behind. All the early corbelled tombs are on mountains visible from the sea, emerging like islands from the swamps and forests.¹ Probably the first-comers were people of the passage-grave cult who settled near the coast of Dublin, for there chiefs were buried in simple tholos tombs exactly copied from those of the homeland (Fig. 55, a).

The stream of immigrants continued, and later chieftains developed a prosperous colony in the Boyne Valley, where their amazing tombs astonish visitors today. The famous tomb of New Grange is probably one of the latest of these (Fig. 55, b). From a splayed forecourt a long passage leads to a cruciform chamber wonderfully constructed with walls and corbelled roof of enormous stone slabs. The whole

¹ For the possible influence of currents, whirlpools, sandbanks, and slack water on the voyages of the Megalith builders, and the configuration of the land on their inland migrations, see an article by Mrs. M. Davies in the *Antiquaries' Journal*, Jan.-April, 1946.

was covered by a huge mound, like a small hill, covering an acre of ground. It was originally mantled with white pebbles and encircled at a short distance by standing stones.

The near and almost equally impressive tomb of Dowth has low septal stones at the entrances to the cells and in the passage, and is buried in a mound two hundred and eighty feet in diameter.

In these tombs and the neighbouring one of Knowth are mysterious and richly engraved slabs with involved and, no doubt, magical patterns of circles, semicircles, and spirals typical of Breton and Iberian tombs (Fig. 55, *d*). Perhaps nothing shows more vividly the importance these folk attached to their religion than the labour they put into carving symbols of their cult on slabs that would be hidden for ever but would, they believed, benefit their dead chief. Even the stones encircling the cairn were elaborately patterned—perhaps to keep evil men or spirits out of the sacred enclosure. Of the fifty-eight kerb-stones so far uncovered at Knowth, forty-eight are decorated—and it must always be remembered that the pattern on the stone was laboriously pecked away with stone tools.

The Boyne tombs were not exceptional structures raised for chieftains of outstanding power and drive, for there is a similar large cemetery on Lough Crew limestone ridge in West Meath. Most of the tombs are cruciform in shape but some resemble the much-discussed long barrows of the Cotswolds (Fig. 55, *f*). Entrances often splay a little to form small forecourts, features which do not seem to have had so much importance for the Boyne people as for the gallery-grave folk. An extraordinary medley of magical patterns on the walls of these tombs ensured the welfare of the dead. That great prehistorian, the Abbé Breuil, has shown that apparently senseless scribbles are actually careless or extremely conventionalized drawings of Iberian and Breton symbols—generally of the omnipotent Mother Goddess, her owl-face, or her necklace (Fig. 55, *d, e*). Even the hatched triangular pattern on the dresses of the Portuguese idols reappears on some tombs.



FIG. 55.—TOMBS OF THE BOYNE FOLK: PASSAGE GRAVES

a, Tirbradden; *b*, New Grange; *c*, Bryn Celli Ddu, Anglesey; *d*, decorated tomb slab and stone basin, Lough Crew; *e*, carving of necklace; *f*, tomb plan; *g-j*, Carrowkeel tombs.

Strong and vigorous groups of Megalithic pioneers settled at Carrowkeel in Sligo on limestone hills strangely like those of Los Millares. Their tombs crown a height overlooking a precipitous cliff and a vast expanse of forest and marsh. The finest of these mighty sepulchres were built with considerable skill (Fig. 55, *h-j*). Stone was specially selected, sandstone blocks were placed where the weight was heaviest, and the enormous slabs used for corbelling were tilted slightly to drain off the rain (Fig. 55, *g*). One tomb, with sills in the passage and at the entrances to the three polygonal chambers, is astonishingly like the Iberian tomb of Antequera¹ and also that of Maes Howe in the Orkneys (p. 231). Not only is the plan identical, but the attention to peculiarities is also similar. One feels that the same architect might have designed both, which is equivalent to saying that an Elizabethan artist designed buildings in London, Africa, and America. White stones were greatly prized by the Carrowkeel people, and some were brought from a considerable distance, but their most sacred object was surely the menhir or standing stone in the central position in the most imposing tomb (Fig. 55, *f*).² It seems natural to find sacrificial (?) ox-bones there, but why were eight water-worn pebbles laid carefully near by? Not all the tombs were magnificent; some were small and badly constructed.

On the easily-defended spur below the tomb-crowned crag was a village of fifty round houses which surely belonged to the Megalithic people. Here again is evidence of pronounced differences in social class, for the largest house is forty-five feet in diameter and five others exceed thirty-five feet, but the rest are less than twenty-five feet, and some are quite small. Unfortunately nothing is known of the life of this community; neither metal nor any sign of agriculture has been found.

By the time the passage-grave people reached Carrowmore on Sligo Bay they were satisfied with miserable tombs, which were often merely round stone dolmens in boulder-walled cairns.

¹ See *Antiquaries' Journal*, XIV, 1934, p. 204.

² As at Bryn Celli Ddu, Anglesey (see chapter heading).

One wonders whether their standard of living had deteriorated too, or whether the Megalithic cult was losing its grip on their minds. However, even here on a hill overlooking the cemetery stands a good, classical, cruciform tomb, seeming strangely out of place and suggesting the end of the adventure of a lone pioneer. Here also the largest cairn in Europe awaits exploration.

There are several very large round cairns also at Carrowkeel and Lough Crew, some of which are surrounded by huge slabs like passage-graves. One in the middle of Carrowmore cemetery has a closed cist in the centre and, though nothing has been found in the others which have been partly excavated, cists may exist. They recall the gigantic closed cairns of Mané and Tumaic in Brittany (p. 178) whose relation to the Megalithic tradition is such a puzzle. Every new discovery seems to make the Megalithic cult more complex. Yet when the complete story is known probably all details will fall into place as part of a comparatively simple faith centred round the great Mother.

How and why Boyne people came to settle on the bleak headland at the north tip of Antrim is another unsolved problem. They seem to have been isolated from their kindred and, unless unopened round cairns in Antrim belong to them, they were an island group in foreign territory inhabited by passage-grave folk and cut off from the sea routes by the furious currents which raced round the cliffs. To explain this curious isolation Hawkes makes one of his fascinating guesses. He suggests that the passage-grave people outflanked the gallery-grave folk and established a colony at Fair Head in order to protect or facilitate the sailing of their ships through the North Channel, which was in the hands of their rivals. If, however, these rivals were then living on the neighbouring hills, it is difficult to see how the colony could have persisted; moreover, the six-knot tide was a menace to navigation. Still this kind of speculation keeps prehistory alive and stimulates the imagination to provide a better explanation—a most difficult task.

One group of Boyne folk settled in Wicklow, where they left

fine tholos tombs, but not in the area producing gold. As these pioneers came from metal-using countries, it is surprising to find that the distribution of their tombs in Ireland does not coincide with the present distribution of metalliferous rocks. To explain this it has been suggested that some of the surface metals have been worked out.

South Ireland was not colonized by Boyne folk, though at least one enterprising pioneer reached Waterford and was buried in a passage-grave there.

The dolmens scattered over Ireland were built by men who had forgotten all but the germ of the great Megalithic tradition—the burial chamber—or by men who were too poor to erect anything better.

The grave goods of the Boyne people are as Iberian as their tombs, with the exception of their pottery, which is surprisingly poor and has a provincial appearance.

In nearly all tombs are large shallow stone basins similar to those in Iberian tombs (Fig. 55, *d*). Often there are also jasper, steatite, serpentine, or limestone beads and pendants—some even resembling those of Crete (E.M.I.). Only one arrow-head, and that leaf-shaped, has been recovered from a tomb, but many hollow-based (Iberian) arrow-heads and flint daggers have been found elsewhere, as well as hanging bowls (peculiar to Spain and Malta), smooth stone balls about the size of tennis balls (Malta), and flat schist discs (Iberia). Cremation was the usual rite, and the ashes were put into skin bags fastened with bone pins or pegs, or else they were laid out on stone trays in cells.

As excavation proceeds and is of a more scientific character, so the complexity of the colonization of Ireland in the pre-Bronze Age becomes apparent, though any attempt to recreate the life of the period is frustrated by our inability to say which colonists were contemporary.

To Munster came people who erected unsegmented gallery-graves, though often a square compartment was made at one end by placing a slab across the gallery. This slab sometimes had a corner chipped away—perhaps as a poor substitute for a

port-hole. The tomb's façade was straight, and the double-walled cairn often wedge-shaped. Many of these features point to the port-holed galleries of the Seine Valley or their derivatives in Brittany and Jersey. Like the Horgen folk, the Irish immigrants were apparently pastoralists and sought primarily good land for cattle. Is it a coincidence that at Gur, where Horgen-like bucket-shaped pots were found, there is a wedge-shaped tomb? Whoever these people were, they finally, and perhaps late, spread over much of Ireland and left many tombs.

It seems probable that settlers from the Scilly Isles or Brittany were responsible for the "entrance" graves of Waterford and Cornwall. These were merely short galleries covered by round mounds.

As immigrants from the Mediterranean seem to have found our islands so much to their liking, archaeologists have searched for rock-cut tombs, and eventually have found two in Galway, near Lake Mask, where natural caves seem to have been adapted to fit the traditional plan. Kelly's Cave has a dozen steps leading to a sunken forecourt, and from it opens a narrow entrance to a chamber, along the side of which are two low benches made of stones similar to the benches of the Majorcan Caves and the slab benches of the Orkney tombs. In the Orkneys, on Hoy, a tomb of the Mediterranean type was cut out of a detached rock, the Dwarfie stone.

Kerry, a metalliferous country, is surprisingly free from Megalithic monuments, but it has numerous rock carvings so similar to many in Galicia that an immigration from that outlying province of Iberian culture has been suspected, but may have taken place in the Bronze Age.

Probably it was Megalithic people who erected pairs of standing stones. Two such form the portal of the interesting tomb of Cashtal-yn-Ard in the Isle of Man. They are male and female symbols, and doubtless were connected with the fertility cults on which the people believed their earthly and future lives depended. There are several in Tyrone and Donegal as in Sardinia. In North-West Spain two stone

symbols are poised on an enormous boulder which is set on natural rock in an impressive position.

The Clyde-Carlingford Gallery-Grave Peoples.—It was probably while the passage-grave people were penetrating into Ireland that the gallery-grave immigrants sailed up the Irish Sea and took possession of the land on each side of the North Channel, bringing traditions which hailed chiefly from Sardinia but also from South France and the Pyrenees. They entered Ireland by Carlingford Lough, where their tombs now mingle with passage-graves, but whether the two peoples were living there at the same time is unknown. Certainly the Carlingford people could not penetrate far into Boyne territory, but they overran most of Ulster and reached Sligo.

They lived on mountain-sides where now the farmland meets the moor, for there the forests thinned and yet there was some shelter and pasturage.

Their early tombs have a strong Sardinian character, and were built in accordance with a well-established tradition. First, a prepared clay floor was laid on the cairn area. Then a long slab-walled gallery was erected, but it was divided into sections by upright stone jambs with low stone sills between (Fig. 56, *a*). For some incomprehensible reason the gallery was generally placed askew to the axis of the forecourt (Fig. 56, *b*). The funerary ritual demanded a spacious forecourt, and in the early tombs the rectangular or wedge-shaped cairn was deeply recessed at one end, so that the space between the two horns formed a semicircular court. As in Sardinian graves the façade is often of great slabs graduated in size, the tallest forming an impressive entrance which is frequently too narrow for mortals to use. Ritual pits and stone axes in some forecourts, together with blocking material, point to sacrificial rites which probably, with dances and invocations, marked the closing of the tomb. Sometimes a menhir was placed on or near the cairn. The resemblance between Irish and Sardinian tombs is often so close that it is tempting to imagine gallant Sardinians sailing away to these cold, wet islands, but such fancies are checked by our inability to date Sardinian tombs.

Transverse sills were not used in the slab-built Sardinian Giants' Graves, though they sometimes occur in the rock-cut

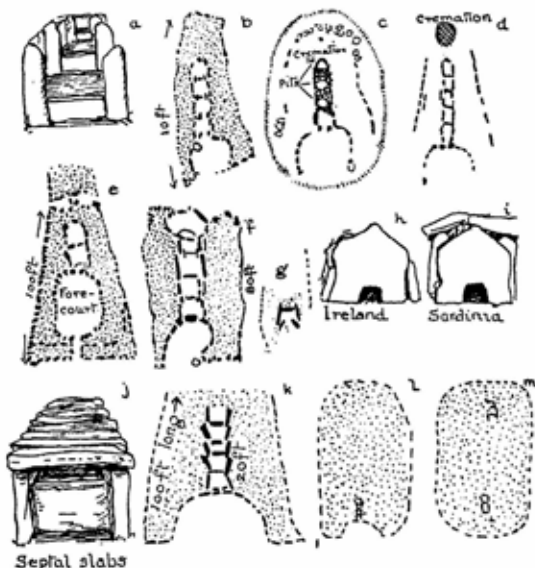


FIG. 56—GALLERY GRAVES

a-l. Carlingford type; *j-m.* Clyde type; *a.* Irish type with sills and jambs; *b.* Browndod; *c.* Dunlay; *d.* Castal-yn-Ard, I.O.M.; *e.* lobster-claw type; *f.* double forecourt type; *h, i.* entrance slabs; *j.* Scotch type with high septal stones; *k, l.* Arran tombs; *m.* Solway tomb.

tombs where the passage was narrowed at intervals. Transverse slabs were, however, considered essential in southern French and Pyrenean gallery-graves and were used by Boyne folk. So Carlingford people on their journey may have

adopted the idea, which must have had some significance and was not strange to them, or they may actually have hailed from the Pyrenean region.

Cremation was the usual burial rite, though the people were not rigid on this score. The cremation took place outside the tomb, and then the remains of the pyre, the ashes, funerary gifts, and even the underlying soil were carried into the tomb. The breaking or releasing of the spirit by fire was accompanied by the breaking of the funerary pottery. Engraved stones are rare in these tombs, yet the builders' women-folk sometimes decorated their pots with the magical designs used by the passage-grave people. And there lies another problem.

As the Carlingford people spread to outlying districts their passion for enhanced forecourts led to queer idiosyncrasies. Some forecourts had horns so long that they nearly met, like a lobster's claw (Fig. 56, *e*); or a tomb had horns at each end. In one cairn the gallery runs right through from one forecourt to another (Fig. 56, *f*). A double-horned cairn was raised for two children who were buried one at each end. These were no ordinary youngsters; they were probably considered semi-divine. Gradually all kinds of degeneration set in; the forecourts and galleries became smaller and ill-shaped, and in the last stage all that remained of this grand idea was a rectangular dolmen with portal stones and sometimes a sill (Fig. 56, *g*).

At Dunloy in Antrim are an unusual tomb and ritual equipment. An entrance chamber leads to a stone-lined cremation trench, in which are three pits containing burnt bones and ash (Fig. 56, *c*). There is a similar tomb in Derry, and an echo of the same idea comes from the gallery-grave of Cashtal-yn-Ard (Isle of Man), where the pyre was at the back of the gallery (Fig. 56, *d*). Traces of the same custom may be seen in long barrows in Cumberland and Yorkshire, though it is doubtful whether cremations actually took place in them. It is curious and perhaps significant that in each of these tombs the pottery is unusual, and this may be an indication of the traffic that seems to have taken place between Yorkshire and Ireland.

The articles found in Carlingford tombs deepen rather than clarify the mystery of their origin. The men were evidently well equipped with leaf-shaped arrow-heads, polished stone axes, chisels, and sometimes stone hammers and flint-headed spears. Of household goods only a few scrapers, saddle querns, and potsherds remain. No spindle whorls have been found. Most of the pottery is similar to the Neolithic A2 ware with rolled rims and angular shoulders accentuated by an applied strip of clay, and is similar to the Yorkshire bowls. A few Beacharra pots tell of contact with the people of the Clyde province.

Archæologists have been puzzled by the strong Neolithic A element in the pottery and the flint tools, which seems at variance with the southern European derivation of the tombs. Until recently there was little evidence of pre-Megalithic Neolithic peoples in Ireland, but it is now becoming clear that the country was by no means uninhabited in those days. Neolithic A immigrants had introduced the art of pottery-making to the Mesolithic fishermen of the Antrim coast. These folk wandered inland and settled by river banks—especially in the Bann Valley, where they left quantities of their characteristic large flint points.

From the sandhills of the east coast the Neolithic folk also moved inland, and in time undoubtedly met the Megalithic invaders, who probably came with few women-folk, and therefore were glad to help themselves to Neolithic women for wives and slaves. These made pottery for the aristocracy and eventually for the bewilderment of archæologists.

Neolithic folk were probably the people who enclosed large areas on hilltops with ramparts, stone walls, and palisades. At Lyle's Hill, Antrim, thirteen acres are so enclosed. In the centre is a low cairn sixty feet across with a stone kerb which includes one stone carved in false relief. The cairn stands on a layer of boulders over a charcoal layer with traces of cremated bones. In the centre was a round cist with burials. Everywhere were Neolithic sherds, and this excavation is said to have produced the largest collection of Neolithic pots in Europe.

Broken polished axes, flint implements, and leaf and rhomboid arrow-heads were also found in profusion. Is this an instance of Neolithic people who held their own and adopted some Megalithic customs?

At Gur in Limerick a Neolithic village has been found with several types of houses. One family or group of relations erected a large rectangular house (thirty-two feet by twenty feet) with low stone walls on which was raised a superstructure. Inside, it was divided into three aisles by two lines of roof-posts and had a central stone-paved hearth. Neighbours preferred round houses with roofs upheld by rings of posts. Some houses were so altered and added to that their plan cannot be seen. The curious thing about the pottery found here is that, though Neolithic A ware only was in the lowest strata, very soon bucket-shaped pots appeared which recall those of the Horgen people of Switzerland and France. What these strange finds indicate it is not possible yet even to guess.

It has recently been proved that at other places Neolithic people lived on crannogs, artificial islands, which they made by throwing boulders or planting stakes in shallow water to form a circle which they filled with peat, brushwood, and stones.

Profusely decorated Neolithic B ware has been found in Ireland, telling of the infiltration of yet another race. It is thus that the dark curtain is gradually lifting off Neolithic life, and fascinating glimpses of the mingling of peoples are promised for the future.

Clyde Group.—After this digression it is necessary to follow the gallery-grave folk to the Scottish half of their province, to which, apparently, they took their Neolithic wives, for they still used the same Neolithic A2 pots. A new ware, however, was introduced; it is named after the tomb of Beacharra on Kintyre where it was found (Fig. 51, *a*). Its channelled technique and designs are closely allied to the channelled ware we traced from the Mediterranean to North France, so it seems probable that some of the colonists came from the Continent. It is significant that they all used stone axes and leaf-shaped arrow-heads.

The Clyde colonists settled on the coasts of Arran, Bute, Kintyre, Islay, and Loch Fyne, and later spread up Loch Etive to Skye and the Hebrides. Though they followed the main Carlingford building rules, it is curious that they never used jambs and low sills to divide their galleries into compartments, but always high (septal) slabs placed transversely at the junction of the overlapping wall slabs (Fig. 56, *j*). These tombs look so like a series of stone boxes placed end to end that they are often called "segmented" cists (Fig. 56, *j-l*). In each section many bodies were placed against the walls, probably in a squatting position. The cairns were either long or round. The former were out of all proportion to the size of the chambers and remained enormous when the buildings so degenerated that they covered only a few small closed cists. It appeared that builders must keep up outward appearance at all costs (Fig. 56, *l*).

Solway Group (Fig. 56, *m*).—Their kindred who settled in Ayrshire and Galloway built small tombs buried completely in the cairns, which are usually round. One cairn often covered many cists. These people seem to have been poor relations of the Clyde folk, for they lived and built their degenerate tombs on high, remote, and bleak moors, which were fit only for indifferent pasturage.

Probably the Clyde group remained undisturbed for long years, and during that time they settled on the east coast of the Isle of Man and Anglesey, and even penetrated to Derbyshire and Cheshire, where at Bridestones the gallery is divided by a port-holed slab and opens off a good crescented forecourt.

These folk appear to have lived more solitary lives than the passage-grave people, for their tombs are never in cemeteries, though occasionally two are close to each other.



CHAPTER XVIII

THE WANDERINGS OF THE BOYNE FOLK

THESE remarkable people seem always to have been lured on by the unknown, and were never daunted by danger, difficulty, or discomfort. A distribution map of the sites of passage-graves outside Ireland shows that they lived in the bleakest, wildest, coldest spots—the Hebrides, the Orkneys, and Caithness. The change from fertile Ireland to these inhospitable shores must have been almost intolerable, especially if any settlers came from Spain or Portugal. The reason for this extraordinary colonization seems to have been trade, for many sites are suitable calling-places for ships. Hawkes brightens the map by calling these villages "mission churches and trading posts," and one visualizes outposts as different from the homeland "towns" as Hudson Bay from Quebec. Nothing of the kind, however; the "mission churches" (actually tombs) often equalled in grandeur those of centres of civilization, and that of Maes Howe in Orkney is said to be the finest in the British Isles. Yet what a life the builders led! To understand it one must read the account of the remarkable Orkney Neolithic village in Gordon Childe's book, *Skara Brae*. There the stone-slab houses, with stone furniture, were entered by doors two feet high, and were connected by tunnels in the mound which covered them to prevent them from being blown away. And if life seems to have been intolerable under such conditions, one must further read of the recently-inhabited houses of the Hebrides in *Antiquity*, Sept., 1938, or of Donegal, June, 1939.

The motive which compelled men to live so hardly was probably the trade with Denmark for that magical, magnetic

substance amber, so desired by the aristocrats of Iberia. To us it seems absurd that the northern route should have been taken, but maybe these sailors knew no other. The winds and tides took them easily from Brittany to Ireland, but why they should make the hazardous passage west and north of Scotland it is hard to imagine. Did they explore it bit by bit, year after year, and at last venture into the great unknown North Sea? Or did some one tell them fabulous tales of foreign lands? If so, who? The peasants who by this time were probably making their way from the Baltic coasts to eastern England, and perhaps Scotland and Ireland, do not seem to have carried amber with them.

The Hebrides and Skye are rich in tombs, and excavation has revealed a curious state of affairs there. Tomb types are so mixed that probably passage-grave and gallery-grave people lived amicably together, and, as two graves of opposite types seem to show that the same ritual was used in each, it may even be possible (to the consternation of some archaeologists) that Megalithic folk were much more tolerant in regard to funerary ritual than has been supposed.

The elaborately constructed Clettraval tomb in North Uist looks like a long segmented cist, judging from the plan, but the compartments grow larger and higher to the innermost, which has been proved to be the real burial chamber by the discovery of a cist in which the body was laid (Fig. 57, *b*). This is one of the few tombs where the deposits on the floor are stratified, and here Beacharra ware lay well below the beakers of the early Bronze Age.

On a neighbouring hillside at Unival is an obvious passage-grave with a thin-walled cist in the chamber. Before each new burial took place in this sacred cist the old bones were removed to the north side of the chamber. Both these tombs had unusual straight façades with ends turned forward to an almost square boundary wall, and both had a similar variety of Neolithic A pottery. Obviously the same people, living at nearly the same time, built them both; yet, if the tombs were judged only from plans, they would be allotted to different peoples.

Although there are a few gallery-graves in the Hebrides and Skye, the majority are passage-graves, of which the tomb of Rudh'an Dunain is a fine example (Fig. 57, *a*). It stands in a little hollow on a remote and wild headland on the grim but

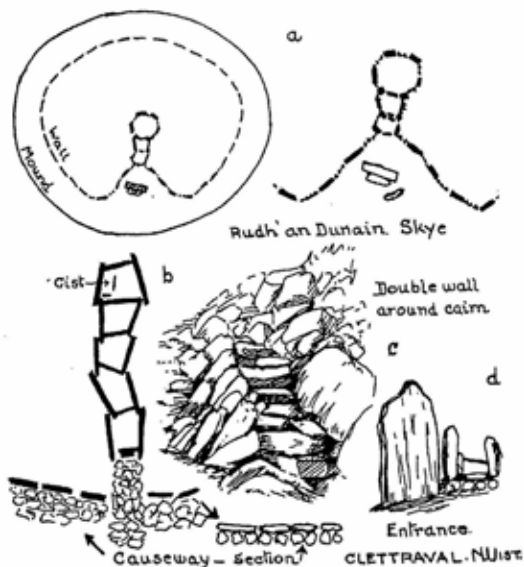


FIG. 57—HEBRIDEAN TOMBS

grand western shore of Skye.¹ Yet even there men planned carefully and built a tomb similar in type to New Grange, Bryn Celli Ddu (Anglesey), and Kercado (Brittany), using

¹ A local farmer said that the land in this hollow is the most fertile in the district, but suggested that the burial was that of a chief who died at sea.

throughout panels of dry masonry and large slabs. The curved forecourt façade rises to high portal stones, and before the entrance lies a prostrate slab. This is another interesting mongrel tomb of early Iberian plan with a Sardinian or Clyde façade; and, stratified twelve inches below beakers, Neolithic A bowls with thickened rims were found.

In some Hebridean cairns the tall stones of the retaining walls show through the cairn, and in a few they become so important that they stand outside it, forming a stone circle. Away on the desolate wave-slashed Atlantic coast of Lewis at Callernish is a strange monument of complex design. Four avenues of standing stones lead from the four points of the compass to a stone circle surrounding a low cairn. In the cairn is a small passage-tomb, and on the top of the cairn a single standing stone (menhir) focuses one's attention. What did these menhirs mean to the people who erected them? Was it thought that they enshrined the spirit of the dead or of the protecting deity? At Bryn Celli Ddu there is a surprisingly well-shaped cylindrical pillar within the chamber of a passage-grave of unusual interest (heading, Chapter XVII).

The Hebrides seem so remote, and the navigation of their waters so dangerous, that it is astonishing to find so many signs of vigorous life and the mingling of peoples there in Neolithic times. Actually these islands were then on the direct trade route, and their numerous harbours would be indeed havens of refuge to seamen making the summer voyages to Denmark. Colonists, therefore, would maintain some contact with the outside world. Also it must be remembered that, though dangerous, the sea was navigable, whereas on land the almost endless forests, the swampy river valleys, and the bogs and marshes presented almost impenetrable obstacles to travellers. Only in very restricted areas of the country was there thinly-wooded land on light dry soil. Sparsely populated Scotland (apart from the coast) might seem as impassable to Megalithic mariners as the jungles of Africa to the early white settlers on the coast.

A delightful sidelight on Megalithic daily life was found

on the tiny island of Eilean an Tighe on a loch in North Uist. Although too small even for a farm, Neolithic potters built a little house and kilns there, and threw their "rejects" on a heap near by. In this quiet spot men or women seem to have specialized in their craft—a state of affairs usually found only among people of a much more advanced stage of civilization. They had a style of their own, too, based on Neolithic A ware, but decorated with quite a variety of simple but pleasant patterns. Moreover, as sherds found in Rousay (Orkney) are exactly like Eilean an Tighe ware, it seems as though the pottery was exported.

A study of Hebridean pottery has shown that for a very long time there was a continuous flow of immigrants to the islands. It is thought from pottery parallels that they came from the Tagus estuary, but whether this proves to be a fact or not, stratified sites show that three or four Neolithic fashions in pottery were brought north in the order in which they were produced in the south.

Western Sutherland has a few passage-graves, but there are no more round the north of Scotland until Caithness is reached, and here there is an extraordinary variety, especially on the land route from Thurso to Wick (Fig. 58, *a-c*). Childe thinks that the sailors so feared the maelstrom of the Pentland Firth that they disembarked their goods at Wick and carried them overland to ships at Thurso, and that along this route people settled. There are still nearly a hundred cairns in Caithness, mostly in small groups denoting small settlements. The tombs are tantalizingly like those of Spain, Portugal, and Ireland, yet with a difference. Some have round cairns, but others are in double-horned cairns, the longest of which at Yarrows is 240 feet; on the other hand, the chambers are absurdly small and the passage only two feet high (Fig. 58, *a*). The usual type is an oval corbelled chamber partly divided into sections by three sets of projecting slabs (Fig. 58, *b*). Close parallels with Iberia are found in the sloping tops of these transverse slabs and in the packing of the angle left with small slabs to support the corbelling (Fig. 58, *h*). These tombs might be

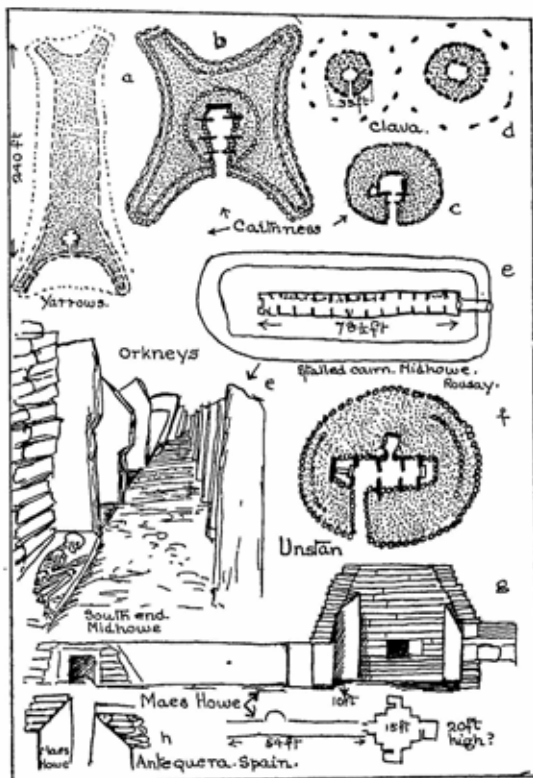


FIG. 58—TOMBS OF THE BOYNE COLONISTS

explained by the intermarriage of Carrowkeel and Carlingford aristocracy and the amalgamation of tomb types. Certainly history and adventure lie behind such mongrel and eccentric monuments. Once again the tomb furniture confuses rather than clarifies the issue, for stone axes, Windmill Hill pottery, and leaf-shaped arrow-heads connect with English Neolithic folk, but sherds of stab-and-drag ware point to Beacharra associations.

The Clava Group (Fig. 58, *d*).—The Caithness folk gradually migrated down to the Beaully Firth, building degenerate tombs as they went. There they met another group of passage-grave pioneers who seem to have made their way right across Scotland by the Great Glen route, for similar tombs are found at each end of it. At first circular corbelled passage-tombs were built in round cairns upheld by stone walls and surrounded by a stone circle as in the Hebrides; later an unroofed chamber was erected in the middle of a ring-cairn with no entrance from the outside, and a ring of stones encircled it at a short distance (Fig. 58, *d*). Here the circle seems the important feature, as the forecourt was in Caithness. Does this mean that two different traditions found expression in this way?

The Orkney Group.—No one would expect the Orkneys to have been one of the most populous parts of the British Isles in Neolithic times, yet Childe says there are almost as many collective tombs on Rousay as there are farms today. The classical tomb is like a long and narrow stone cowhouse, divided by projecting partitions into shallow stalls, in which there are often low slabs or shelves for the dead to lie on. At Midhowe on Rousay the chamber is no less than 78½ feet long and is divided into twelve compartments, each furnished with a stone shelf. Thirty skeletons were found, all but one being on the left side of the chamber and often piled one on the top of the other (Fig. 58, *e*). A short passage leads to the front of a long cairn, which has a fine wall of thin slabs placed in herring-bone fashion. Usually the passage leads to the middle of the stalled chamber, which lies at a right angle, and the cairn is round (Unstan type; Fig. 58, *f*). In one tomb is a carved spiral like those in the Boyne tombs.

Perhaps a chief, coming from Ireland, tried to emulate the extravagance of New Grange when he built the finest tomb in Britain at Maes Howe and buried it in a round barrow which rises like a hill from the moorland. A passage, fifty-four feet long, lined with great slabs, and with portals at two points, leads to an impressive corbelled chamber, fifteen feet square and once probably twenty feet high. Cells open into it three feet above the floor. The walls are buttressed by slabs ten feet high with sloping tops, and the angle which is left is filled with dry stone walling, as at Antequera (Fig. 58, *h*). Although

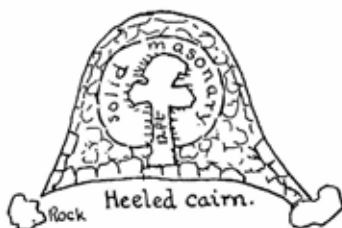


FIG. 59—HEELED CAIRN

the resemblance to the Spanish tombs is very exact, probably Irish ones were the actual model. Skilled workmen must have been shipped from Ireland to tackle the fitting together of heavy eight-foot slabs to form a corbelled roof of this size (Fig. 58, *g*). The enormous fosse, fifty-five feet wide, encircling the mound has also its parallel in Ireland.

In the Orkneys are circular cairns covering chambers into which from three to fourteen cells open, and the entrance passages often contain split bones of animals. It is suggested that these buildings were houses, but human skeletons have been found in them, and in one are the skulls of twenty-four dogs and in another seven—surely a sacrifice to the dead.

How long it took the ancient mariners to colonize all their outposts no one knows. Certainly the northern tombs are much later than the southern ones.

Heeled Cairns.—In the Shetlands are strange cairns shaped like the heel of a shoe with the front expanded to form a shallow, curved façade terminated with big stones at each end as in Sardinia (chapter heading). The entrance passage leads to a trefoil-shaped chamber, and at Vementry this is surrounded by a solid block of slabs, as though the builders wanted to make a corbelled chamber with cells, but had not the skill to balance the slabs.



CHAPTER XIX

THE PREHISTORY OF SCANDINAVIA

SYNOPSIS

(Note: The Periods overlap considerably)

- A. Pre-Neolithic food-gatherers—Maglemose, Ertebølle, Gudenaa, Dwelling-place cultures of E. Baltic.
- B. First Northern Neolithic culture—introduced by people from south Baltic shores.
- 2200 B.C. C. Immigrants from the west or the south Baltic introduced dolmens.
- 2000 B.C. D. Immigrants from the west or south introduced passage-graves which were also used by immigrants from the Weser region (Basket Ware). Battle-axe warriors.
- 1700 B.C. E. The spread and dominance of the Battle-axe warriors as the ruling class over the fusion of races. S.O.M. folk to Sweden (?).

The dates are those given by Hawkes; Childe's are from one hundred to two hundred years later.

WHAT an amazing travel book of anthropology could have been written about 2000 B.C. by a Cretan merchant, an Egyptian official, or a Sumerian priest, if he could have travelled from his civilized homeland to the wilds of Northern Europe. From their well-organized countries and great towns such travellers would pass to Asia Minor or Greece, where people were becoming urbanized and were using bronze. In Central Europe they would find tribes who used only copper, but were emulating their southern neighbours as well as contending among themselves. The north European plains held so many groups with varying cultures that it must have

seemed impossible for them ever to fuse into nations. Late Danubians, modernized Mesolithic tribes, Battle-Axe warriors, men of the older northern cultures, Western Neolithic folk from Switzerland, Megalithic mariners, and mixtures of all these, fought and traded with each other, learnt from and married each other; but all would have seemed barbarous to educated visitors from the ancient civilizations. Still farther north they would encounter only hunters and fishermen ignorant of farming, and in most cases even of pottery-making. These would seem as different from themselves as the Esquimaux are from the modern scientists who study them.

Yet these northern food-gatherers were not lowly, stupid savages. Through several centuries they had evolved a culture which was remarkably well adapted to their environment. Some of their excellent tools of bone and hard stone were actually ground to obtain a sharp cutting edge, and their carvings and rock engravings show that they had finer artistic talent than many Neolithic peoples. Three groups, the Maglemose, Gudenaa, and Ertebølle, retained their old culture into Neolithic times. Along the shores of the Baltic some of the food-gatherers settled down to a more sedentary life. They ate enormous quantities of shell-fish, and dwelt and were buried amid the debris of their meals, which rose to be mounds or kitchen middens. Until recently the Ertebølle group were thought to be without knowledge of agriculture, but casts of grain have been found on some of their later pots. It is now known that their culture lasted a long time, passing through four stages, and that in some places it was contemporary with Megalithic culture.

The earlier Ertebølle pottery is coarse and roughly made with coils of smoothed clay and an out-turned rim marked with a row of pit marks or dimples imprinted by a finger; but the astonishing and inexplicable feature of this ware is the peculiar pointed bag shape, which is exactly like that of the El Garcel pots belonging to the early colonists of Spain (Fig. 60, *a, b*). How came it here? Nowhere else has this shape been found, and there are no links between Spain and



FIG. 60—PRE-MEGALITHIC AND EARLY MEGALITHIC CULTURES OF DENMARK

c, d, e, bone comb, fish-hook, and pin; f, antler hammer; g, pointed butted axes; h, sickle; m, mace-head; n, collared flasks; o, funnelled beaker; p, straight-necked amphora; q, amber amulet; r, thin-butted axe; s, tongue mace-head; t, stone battle-axe; u, house; v, passage grave (compare fig. 55, a-c and 57, a).

Denmark. Lamps in the shape of clay troughs were also made. Towards the end of this culture the influence of other peoples is seen in the cord, stab, and shell-edge impressions on the pottery.

Ertebølle men had good tools and weapons. Flint was flaked into serviceable axes and picks; hard stones were selected to make roundish stone axes, and the old technique of grinding bone and volcanic stone was applied to flint, though antler was still used extensively (Fig. 60, c-g).

Religion may have taken a native form among these northerners, since fine flints and amber ornaments deposited in the peat have been tentatively interpreted as offerings to gods.

Dogs probably played a large part in the chase, for two varieties were tamed, or partially tamed—a large wolf-hound and a smaller dog; and dogs were more numerous then than during the subsequent periods when the population was much larger.

At Strandegård in South Zealand a village of rectangular wooden houses has been excavated where late Ertebølle folk lived. They were evidently in touch with Neolithic peoples, for they kept cows; but as no grain impressions or querns have been found they were apparently ignorant of agriculture. It is an interesting pastime to try from the list of things found in or near their homes to reconstruct the life and contacts of these people just emerging from the hunting stage. There were bones of cows, seals, wild boars, red deer, and doves; 323 well-made flake axes, 4 thin-butted axes, 22 Ertebølle pots, 10 lubber lamps, 8 cord-ornamented beakers, and 21 funnel-neck beakers. The presence of the corded beakers presents a problem that archaeologists have not yet solved.

At Haunelev, two miles inland from Strandegård, is another village whose rectangular wooden houses tell a very different story. There were imprints of emmer and bread wheats, barley, 5 querns, bones of cows, sheep, and pigs, and a few bones of red deer, 153 flake axes, 26 thin-butted axes, 9 cord-ornamented beakers, 211 funnel-neck beakers, 11 collared flasks, and 1 polygonal axe.

From this it is obvious that these folk were farmers who had almost given up hunting, and they represent the first Neolithic people of Denmark. Their very individual pottery had three typical forms: the "funnel" beaker, the straight-necked amphora, and the collared flask (Fig. 60, *o, p, n*). The last is thought to be a copy of a native leather bottle with a nozzle in wood or horn. The decoration is of pits, cord impressions, or incisions, but always in long sweeping lines which emphasize the attractive shapes of the pots. As these pots have been found in Ertebølle sites, in earth graves and in dolmens, the question as to how agriculture reached Denmark is still unsolved. At one time it was thought that Megalithic immigrants brought it; but the earliest pottery has been found in predolmen sites. Most archaeologists now believe that the first northern culture was a Neolithic culture which reached Ertebølle and other native peoples from the Danubians.

Childe has recently shown (*Antiquity*, September, 1949) how much the first farmers retained of Mesolithic lore. They buried their dead in an extended position; they placed votive offerings of amber (later, pots) in bogs; they used chisel-shaped arrow-heads and battle-axes of antler or stone. The Mesolithic hunters must have mixed with the Danubians who reached the coasts of Germany and Poland. Childe believes that after learning Neolithic ways some of these enlightened Mesolithic folk migrated to Denmark and Sweden and introduced farming there. An objection to this theory is the pronounced difference between the northern pottery and the Danubian; but Childe supposes that the forest folk already had good vessels of skin and bladder, and that they were sufficiently independent to model them in clay rather than slavishly copy the gourd-derived Danubian forms. To these folk Childe ascribes the earliest small dolmens (or dyssers) which he thinks were a substitute for the thin-walled cists used by the eastern and original groups of the first northern farmers. In Denmark the only available stones were boulders which could not be split into slabs.

In support of this theory there is the significant fact that this

first northern culture was flourishing at an early date not only in Denmark and Sweden, but also across northern Germany to Poland (Fig. 63).

The adoption of agriculture soon began to change the face of Denmark, for extensive forests had to be cleared. Recent investigations of the pollen still to be found by experts in the deep layers of bogs have given proof of a sudden decrease of forests. Strata below the Neolithic have tree pollen only, but in the Neolithic stratum there is an abrupt change to pollen from weeds which grow with corn, and very little tree pollen occurs. What a picture of purposeful activity this calls up—the felling of great oak trees with flint axes and fire, the burning of scrub and roots, the hoeing of rough ground with stone or wooden hand hoes, and the sowing of precious seeds in little plots. It is claimed that the plots in very early cultivation can actually be traced today by piles of stones at the edges which had been picked up from the field.

Denmark was a delectable land for prehistoric folk, for, besides good soil and numerous harbours, it possessed rich stores of flint and was the home of amber with its curious electrical (at that time magical) properties. Maglemose Mesolithic people had used amber, but the great demand for it came in Neolithic times. Nothing we have can compare with the value assigned to a life-giving amber amulet.

Megalithic Period.—About 2200 B.C. there came to the north and west shores of Neolithic Denmark men whose one claim to fame seems to have been that they introduced the awe-inspiring Megalithic cult and buried their chiefs in dolmens built of a few upright blocks and a very heavy capstone (chapter heading). Many dolmens, though small and narrow, were collective tombs, as the number of broken pots shows. In these graves native pottery is found—funnel-necked beakers, collared flasks, and round-bodied jars with wide necks. It would appear, therefore, that the natives sometimes adopted the new mode of burial, though still frequently using earth graves, while the Megalithic invaders adopted native pottery. In fact, the intruders seem to have retained curiously little of their own

traditions except their tomb cult, for both peoples used thin-butted axes, long and rather thin blades of ground flint with the rectangular section of metal types. These were made in large numbers and some were eighteen inches long, perfectly finished, and of wonderfully regular shape (Fig. 60, *r*).

The origin of Danish dolmens (dyssers) is still far from clear. It has been suggested that Megalithic peoples brought the idea from the British Isles (where, however, they were the latest tombs) or from South France (Hawkes), and recently Childe (p. 237) claims that the earliest were built by the first farmers for single burials. This theory would account for the native pottery and tools found in them, but not for dolmens which are said to be collective tombs.

The northern Megalithic culture was divided by Montelius into four periods, but the first is now discarded; the second is that of the dolmens just described; and Period III (subdivided into four phases—*a*, *b*, *c*, and *d*) is famous for its passage-graves and saw the climax of northern culture.

Passage-graves, with round or polygonal chambers and short passages of large slabs, were probably introduced by fresh people. Several huge capstones roofed them in, though occasionally a little corbelling was introduced to reduce the open space. As was the case with the dolmens, the square or round mound reached only the level of the capstone. These large fine tombs closely resemble those of Iberia and Ireland, except that dry stone walling was used to fill only the spaces between the slabs, and corbelled roofs were never made. In Jutland a small side chamber was often built on to the side of the large one. The average size of the chamber was from four to seven metres, and the height from one to two metres, but when passage-graves were introduced to Sweden they were built on a grand scale, the largest having a chamber sixteen to sixty-five metres long and a passage twelve metres long.

It is surprising to find that very few pots in these tombs show any relationship to the pottery of other Megalithic countries. Fig. 62, *a*, *d*, *f*, illustrate bowls from Denmark resembling those from Scotland and Iberia.



FIG. 61—PASSAGE-GRAVES AND THE CULTURE OF PERIOD IV

a-e, types of passage-graves; f, Swedish tomb; h, i, very finely flaked flint tools and weapons; j, imitations of Central European metal pins; k, Battle-axe cultures.

The Megalithic idea of religion seems to have been adopted with great enthusiasm by Danish Neolithic folk and by immigrants who, however, retained their own style of pottery modelled on baskets (Fig. 62, *v*). These newcomers were probably refugees from the uprising Battle-Axe warriors, who, growing strong and numerous in Saxony and Thuringia, thirsted for new conquests and plunder, and so overran their neighbours in several directions and drove the people living between the Weser and the Elbe north into Denmark. They carried on the Rössen tradition of angular pots decorated with bands of stamped or deeply-incised zigzags, which were often arranged effectively in alternate horizontal and upright bands. The lively but geometric patterning suited these stiff-looking pots, with thin sharp angular shoulders and strap handles, as well as the long lines of the earlier beakers and collared flasks suited their graceful swelling shapes (Fig. 62, *h, j*). One cannot resist imagining a lively, forceful people who delighted in the rich but slightly barbaric jugs, bowls, cups, and ladles they used. They were not, however, above copying or buying foreign ware, for Danubian Lengyel fruit-stands found a place in their homes and graves—a great contrast to their native pots (Fig. 62, *i*).

Most of the other objects belonging to people buried in passage-graves appear to have been derived from Central or Eastern Europe. Their favourite weapon was a stone imitation of a Cretan metal double-axe, but they also had flint daggers, maces with disc-shaped heads, thick-butted "German" axes, and transverse arrow-heads (Fig. 62, *l-n, s, u*). Splayed flat axes of Danubian II type, hammer-headed pins like those in Kuban tombs, and copper spiral armlets were rare treasures (Fig. 62, *r*). Metal ornaments were usually copied in bone or amber. Amber was of the greatest importance, as many as 4,000 amber beads and pendants having been found together. Rich chieftains wore magnificent amber necklaces composed of many rows of beads separated by spacers and fastened with triangular clasps (Fig. 62, *q*). Amulets in the form of double-axes were highly prized (Fig. 62, *p*).



FIG. 62—THE FINEST MEGALITHIC CULTURE OF DENMARK

a, d, f, Danish pots; *b*, Scottish pot; *c, e*, Portuguese pots; *g*, Becharra pot; *f, h, i*, Grand Style pottery; *l*, mace-head; *m*, thick-butted axe; *n*, arrow-head; *o, q*, amber beads; *r*, copper armlet; *s*, flint spearhead; *t*, copper dagger; *u*, stone double axe; *v*, basket ware.

However mixed the passage-grave people were, and however much they borrowed from other peoples, they undoubtedly developed a fine culture of their own. At its height they produced a dark ware, with a shining surface of rare fineness and beauty, under influences that can have come only from immigrants from Portugal who brought bell beakers with them (Fig. 62, *d, e*). None, however, has been found in Denmark, and it is curious that beyond a triangular copper dagger (Fig. 62, *f*) nothing in Danish passage-graves can be traced directly to Iberia. This splendid Danish pottery is known as the Grand Style ware.

The passage-grave people lived in large villages like that at Troldebjerg, Langland, where a long street of curiously-built wooden houses has been excavated. Each house had one long wall of logs, six feet high, firmly set in a ring of stones (Fig. 60, *u*). From this wall a log roof sloped up to a row of posts, eleven feet high, down the centre of the hut, and on the opposite side sloped to the ground. These houses were ninety-two feet long and were divided into two parts. As only one part contained a circular stone-rimmed hearth or pots, it is thought that the other part was a cow-shed. The contents of these houses reveal clearly the several influences which played upon the farmers. There were stone double-blade axes (Central Europe), scrapers and chisel-shaped arrow-heads (Mesolithic), Grand Style pottery, ladles, and pedestalled bowls (Danubian). Such large houses must have been the home of a patriarch and his married sons.

Denmark must have been a stimulating cosmopolitan centre at this time with Megalithic mariners' ships riding at anchor in its numerous natural harbours while the unloading of cargoes proceeded, and, perhaps, a few dark-haired colonists landed with news of the "cities" of Iberia, Ireland, or Brittany. Danubian merchants and their heavily-loaded servants here ended their journey from the centre of Europe and sought to barter metal weapons and ornaments for precious amber; Nordic farmers, fair, tall, and strong, probably mixed with a few Mesolithic hunters clad in skins, while here and there

strode a group of Battle-Axe warriors, conscious of their people's power. At first all these folk seemed to live together amicably, but behind any façade of peace lay the threat of war in the movements of the Battle-Axe warriors.

For a time things seem to have been prosperous enough in Jutland and the islands. Larger and finer passage-graves were built in varied styles and a distinct northern type was evolved. Under a rectangular or round mound a rectangular or oval chamber (with a short entrance passage on the long side) formed a T-shaped structure—somewhat like those of Finistère in which amber is found (Fig. 61, *c, e*). At Alsbjerg three rectangular chambers of diminishing size lie behind one another and faintly resemble the Caithness tombs (Fig. 61, *b*). In the Danish islands were imposing double tombs with long oval chambers under one mound (Fig. 61, *d*).

There must have been a fairly large settled population in Megalithic districts, for as many as a hundred bodies (with a fine array of gifts) were found in the large tombs. The older skeletons and the pots were usually pushed ruthlessly aside or thrown out to make room for fresh arrivals. In some cases, however, the old bones were carefully placed in neat heaps surrounded by stones, or in small stone cists against the walls of the tomb.

A map of the distribution of passage-tombs of various kinds, from simple round chamber-tombs to many more elaborate types, throws an interesting light on the troubles that soon overtook the cultured folk of Denmark. Only early passage-graves are found in Jutland; in Zealand later types occur, but they were often only half filled. In the islands, however, the whole series continues uninterruptedly.

New peoples, who buried their dead in single earth-graves and carried battle-axes, were infiltrating into Central Jutland after causing great disturbance and dispersal among the hunter-herdsmen of the northern culture—akin to the first Danish Neolithic. These tribes once formed a roughly continuous band from the Elbe across North Central and Northern Germany to Poland, but the Battle-Axe folk separated them

into groups of semi-nomads who developed in their isolation a related but distinct culture. Such were the Walternienburg folk of the Salle basin, the Baalbergers, who lived between the Harz basin and the Middle Rhine, the Bernsberg tribe farther down the Rhine and the Havelland of Brandenburg (map; Fig. 63).

As the Battle-Axe warriors swarmed over the fertile plains of Schleswig-Holstein they probably pushed out some of the Elbe-Weser folk who, according to one theory, went east to Mecklenburg and west to the Drenthe and Erms provinces of Holland. There they buried their dead in cists or very long gallery-graves with short entrances on one side—known as a Hun's Bed. These were covered with unusually long barrows surrounded by large stones. Megalithic influence was evidently strong here and in northern Germany, where some rectangular barrows were extremely long.

Schleswig-Holstein did not long satisfy the warriors, for soon they invaded the centre of Jutland and apparently subdued the Mesolithic or early Neolithic folk living there, though at first they left the Megalithic farmers near the coasts unmolested. Eventually in the middle of the passage-grave period they too were overrun.

In Sweden the remarkable concentration of fine tombs in Västergötland and others on the south-west coast may have been built by refugees from Jutland. On Zealand the Megalithic farmers were able to put up a stout resistance to the invaders for a long time, but towards the latter part of the period they also were dominated. Perhaps the warriors were satisfied with their conquests, or the islands were defended more easily, for they seem never to have been subdued, and there the Megalithic builders lived and worked and built as freely as their kinsmen who were colonizing areas in Sweden and Norway.

Where these people could develop undisturbed they lived well—for their time. They did little hunting. Most of them were farmers; some of them may have cultivated flax. Specialization of industry was, however, beginning: flint

workers and probably carpenters were provided with the necessities of life in order that they might work at their own craft. Trade was developing and must to some extent have been organized. Amber was the chief export and probably it was already being carried across Europe by the ways which later became known as the "amber routes." By sea this magical substance was shipped to Brittany and Iberia. Traveling merchants met danger frequently and unexpectedly in early times, and when they feared robbery and capture they often buried their precious stock. Sometimes a mishap befell one of them and he was never able to recover his treasure; so through the centuries it has laid hidden until an archæologist has dug it up and reported the finding of a hoard. A hoard from Bygholm in East Jutland consisted of four copper flat axes, a Spanish-type dagger, and two spiral armlets in a funnel beaker. Right across Europe—perhaps even from Crete—men carried double-axes of copper which the Danish folk copied in stone, and they evidently learnt the magical power of such axes, for they fashioned amber amulets in double-axe form.

In the latter passage-grave period (III c) the Grand Style of pottery lost its vigour, curves smoothed out angles, the forceful stab-and-drag patterns changed into net-like designs finely incised. Elegance and delicacy replaced vigour and decision (Fig. 62, *k*). Often these vessels are very beautiful, and what is said to be the finest prehistoric pot known belongs to this period. Gradually, however, the style degenerated and became over-refined and weak. Lines were rouletted, impressed with a shell edge, or feebly incised, and the designs gave picturesque but badly balanced effects. At last both vase and pattern lost all vitality and became vague, uncertain, and insipid (Period III d). At the same time strong strap-handles dwindled into useless lugs. Contacts with Copper Age Iberia seem to have been strong, for the arched eyebrows and eyes of the Mother Goddess often appear on the pottery (Fig. 63, *a*).

During this third period the Battle-Axe warriors were gaining



FIG. 63—DISTRIBUTION MAP OF EARLY DANISH CULTURES. PERIOD IV CULTURE

b, flint dagger with wooden handle and leather sheath, from a bog in Hanover.

power and territory. Sometimes their dead were buried in Megalithic tombs, but generally they preferred their own earth graves—one for each person. These were often paved with stones or lined with wood, and were usually covered with small barrows. Fortunately for prehistorians, generations of these folk buried their dead under the same barrow and so stratified the grave goods. The earliest and lowest graves are called "underground graves," the next "ground or surface," the next "above ground," and the latest "top graves." The grave goods gradually deteriorate throughout this series, until at the end the battle-axes are almost straight and the beakers are like the inverted crown of a top hat or the flower-pot beakers of the Oder folk (Fig. 61, *k*).

During this period fresh relays of warriors surged up from several directions into Jutland. One from Central and Northern Germany probably introduced the use of small cists. The passage-graves meanwhile had almost lost their individuality and become gallery-graves, except that the long rectangular chamber had a short entrance passage which was a narrower and lower continuation of itself.

The number of Megalithic tombs extant in Northern Europe is surprising, and doubtless far more have been destroyed. South Sweden has 4,000, the Danish Isles 3,600, and even Rügen had 229 in 1829. Just before the 1914-18 war it had 38! There are also a great number in Northern Germany. In the whole of the British Isles there are only 1,500. In spite of their numbers and the careful excavation by Danish archaeologists, the question of their origin remains unsettled.

Childe and others consider that the Megalithic cult was introduced by the Atlantic route, via Scotland. Hawkes agrees with him, except that he believes the early dolmens were built by people from Southern France—Pyrenean centre.

Daniels challenges the whole Montelius sequence and thinks that in the north, as in Iberia, Brittany, and the British Isles, dolmens were late and were the last stage of the degeneration of passage or gallery-graves. This theory is startling and, as Daniels remarks, if his theory is right, then the usually

accepted sequence of grave goods is wrong! Certainly few people would adhere rigidly to the Montelius sequence, for many types overlapped; Grand Style pots have been found in a small closed dolmen and dolmen pots in passage-graves. In a country where so many people met and mixed together it is likely that old customs would be retained in some places, though new ideas had been adopted in others. Even in Iberia passage-graves, dolmens, and cists were in use at the same time.

Daniels believes that megaliths were introduced directly from Spain along the English Channel. He points to the fact that some Iberian tomb types and pottery designs are often nearer to the Danish than those of the British Isles. For instance, Beacharra pots recall those of Brittany, Spain, and Denmark, but only vaguely, while some Spanish and Danish pottery is very much alike (Fig. 62, *a-g*).

The fact remains, however, that the Unstan (Orkneys) tombs strongly resemble the rectangular passage-tombs of Denmark (Fig. 58, *f*). So the Atlantic North Sea route may have been used by some ships, even though others sailed through the Straits of Dover. It is difficult to understand why such inhospitable spots as those in the north of Scotland and the adjacent islands should have been colonized if there were no sea-borne trade to support.

Whichever way the Megalithic cult reached Denmark and Scandinavia, a virile people there quickly adapted it to their own ideas and produced distinct styles which have no parallel elsewhere—such as the massive roofed dolmens, the T-shaped passage-graves, and the long rectangular barrow.

By the end of the Megalithic period, about 1800 B.C. (Childe: 1400 B.C.), when most of Europe was using bronze, the various peoples of Denmark seem to have fused, the warriors being the ruling class. Their typical weapon was then not a battle-axe, but a flint dagger copied from a bronze original: hence this is known as the "Dagger Period." Strangely enough the finest flint work in the world, except the Egyptian, was produced in Denmark at this time; its perfec-

tion was due to the fervent desire of the craftsmen to copy in stone as closely as possible a bronze weapon or tool (Fig. 61, *h*). In fact these amazing flint-workers were living almost in the age of metal.

The tombs were then stone cists, usually from 2.50 to 4 metres long and built of thin flags. In Central Sweden there is a very interesting group of very long cists with a port-hole stone leading to an extension beyond (Fig. 61, *f*). These must surely have been introduced by immigrants with S.O.M. culture either from the Paris basin or from colonies in Westphalia or Thuringia.

As so many skeletons have been found in northern Megalithic tombs and separate graves, it might be expected that the racial problem would be solved. All shapes and varieties of standard types of skulls have come to light, corroborating the archaeological evidence that there was considerable mixing of races during this period. As the racial types of the Bone Age (Maglemose, etc.) and Kitchen Midden people are unknown, it is not possible to say how far the older native characteristics prevailed.

Many interesting facts about the people's lives have been learnt from the skeletons. Out of 294 people whose age can be judged, only six lived to be over sixty, and the heaviest death rate was among young people from twenty to thirty years of age. Chronic arthritis and rickets were very common, as might be expected. Fractured bones were badly set and must have caused much pain and discomfort, but of five cases of head wounds only one died from the wound. Three survived not only wounds but trepanation of the skull, performed with skill but without the sterilization of the flint knives!



CHAPTER XX

PEOPLES OF THE TRANSITION PERIOD

IN the days when Prehistory seemed a simple science the Neolithic Age was supposed to end suddenly, and the Bronze Age to follow forthwith. Further investigation has proved that people of early times behaved much as people have done since, and that our rigid divisions are the creation of our ignorance. Prehistoric Britain was very sparsely populated, and different groups of people could infiltrate without interference with each other, if they were peaceably inclined.

Towards the end of the Neolithic Period new immigrants reached our shores from across the North Sea. They seem to have sprung from the old Mesolithic stock like their Peterborough neighbours, who had been coming from the same direction for years. Comparatively little is known of the new-comers, but every fresh item of information is arresting and surprising.

Most of their pottery has a roughened surface or is bucket-shaped and decorated with grooved lines, wavy bands, pellets, or strips of clay. Such "grooved ware" has been found in S.E. England, East Anglia, the Firth of Forth, in three of our most puzzling monuments—Woodhenge (Wiltshire), Dorchester-on-Thames, Stonehenge (earliest stage)—and in the stone-built villages of Skara Brae and Rhinoy in the Orkneys. The tools of these folk were of Mesolithic type—chisel-shaped flint arrow-heads, transept flint axes, antler hammers, and

polished flint knives. All groups wore skewer-shaped bone pins, seven to nine inches long, well-rounded and polished. These perhaps fastened their skin garments. The culture of different groups seems to have varied somewhat—in contrast to that of the Beaker people with its strange uniformity throughout Europe.

The excavation of the Dorchester circles has made it possible to piece together a more complete picture of the lives of the eastern Neolithic colonists. Their outstanding monuments were earthen circles with ditches (usually on the inner side) and with one entrance. These are called "henges." Henges of the Bronze Age have two entrances. Until recently it was thought that all circles were post-Neolithic and had the same origin. It now appears that stone circles had little in common with henges. Their distribution is striking, for they keep to the highland zone, except in southern England, while henges are normally on lowland and near rivers. Only near the great rallying centre between Wiltshire and Oxfordshire and in Cumberland do the two types meet.

While the Dorchester excavation has thrown much light on eastern Neolithic life, it has also raised many unexpected and exciting problems. It is clear that the ditches were primarily quarries for material to build the bank, which may have served not only as a barrier but also as a stand for viewing the ceremonies within the sacred area.

The fifty-six pits within the curve of the bank at Stonehenge have been called "post-holes," and so a wood henge was postulated. Now it is believed that the pits never contained posts, though such an assertion would have seemed incredible until similar empty holes were found within the Dorchester circles. There is not a trace of wood or stone posts, although wooden planks were found intact in one quarry ditch.

Circle I revealed surprising features, some of which may alter our ideas of Neolithic A peoples, for it was a community of these folk who dug the earliest ditches and dropped "Abingdon" type pottery in the bottom of them. It was later that Peterborough people came, as the position of their potsherds

proves. Strangely enough, the Neolithic A men dug continuous ditches, while those of Peterborough folk were causewayed, like those at Windmill Hill. The most astonishing discovery was that of a rectangular ditch and bank (enclosing the oval ones), which was the work of Neolithic A people. This is the only square structure known to belong to the Neolithic or Bronze Age.

Circle I has further interesting points. Neither the rectangular nor the oval banks had entrances. Within the central area were thirteen pits, ranging from four feet nine inches to fifteen feet in diameter, but only from one foot two inches to two feet in depth. These were evidently filled with soil soon after they were dug, for there was little gravel silt. In the filling was found an antler pick, twenty-two Neolithic potsherds, a chisel-shaped arrowhead, and flakes struck off in tool-making. Near by were four cremation burials in small compact pockets, which showed that the bones must have been deposited in bags—probably of skin. Indeed, Professor Zeuner, who has examined the bones, says that some of the large pieces had been crushed in order to squeeze them into the bags.

Cremations were customary among some Neolithic A folk, but in a different form. The bodies were cremated in flues or on platforms, and mounds were erected on the sites. At Dorchester the dead were burnt on pyres, and when the ashes were cool some, but not all, of the bones were collected and placed in bags. No mounds appear to have been raised over the interments, though there were probably some grave marks, since the burials never overlap. With two cremations partially burnt bone skewer pins were found. A strange find in this cremation cemetery was an inhumation burial in a conspicuous position in the centre of the circle, and opposite a gap in the ring of pits. Unfortunately there were no grave goods by which to date it.

Why were the ditches largely filled with a fine, black, rather greasy soil, when the local soil was mostly gravel? The black soil defies the ingenuity of experts to analyse it, and its origin

has not been discovered. Large quantities of it have been found in all the extensive excavation of Neolithic sites near Dorchester.

Proof that Neolithic A folk were in touch with the Eastern Neolithic tribes is found in a piece of grooved ware, chisel-shaped arrow-heads and tranche axes which were recovered from primary positions. One would like to know if Neolithic A folk also adopted some of the customs of the Easterners, or whether the henge idea with its accompanying rites was their own.

Circles IV, V, and VI were much smaller, and held twenty-five, twenty-one, and forty-nine cremations respectively. Each circle had one entrance. An inexplicable feature of the causewayed ditches were the pits in the bottom of them, none of which showed signs of wood or stone. Cremated remains were found again in the central area, but the majority were in the ditch silting.

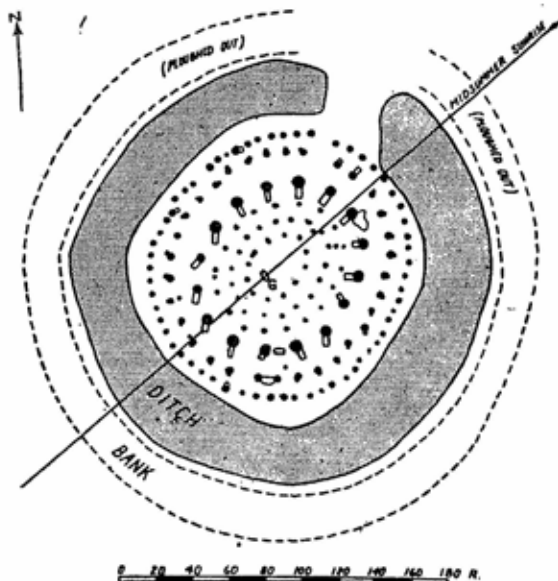
A tentative effort has been made to assess the number of people who used each cemetery from the bone fragments of the one hundred and twenty individuals (none over middle age). It is considered probable that cemeteries II, IV, and V were used by groups of from ten to twenty people.

In *Prehistoric Sites at Dorchester* the excavators give a wealth of information concerning the ingenious methods used to extract the smallest item of information from the apparently unpromising site.

A different type of sacred enclosure, built by eastern Neolithic people, is Woodhenge, where a bank with an internal ditch encloses six concentric rings of wooden posts, which may once have supported a thatched roof, so forming a large hut. In the centre excavators found grim evidence of a foundation sacrifice—an infant's skeleton with a cleft skull. At Arminghall, near Norwich, a single circle of eight posts was enclosed by a bank and internal ditch.

Few Transitional henges contain stone circles; most of them appear to have been sacred places defined by banks and ditches, but in very few cases has the central area been ex-

cavated. At present the Dorchester cremation type of henge seems exceptional, but the study of these strange monuments is only beginning.



[Courtesy of Dr. and Mrs. Cunningham]
FIG. 64—PLAN OF WOODHENGE

Beneath a cairn on Cairnpapple Hill, West Lothian, recent excavations revealed monuments of no less than four periods. The late Neolithic structure was an arc of seven pits facing west and a "cove" of three enormous stones facing east. Near all but one of the holes were cremation burials, and with

them were two fragments of bone skewer pins. A sherd of western Neolithic pottery, and, more astonishing still, fragments of axes made of Graig Lwyd and Langdale stone were probably of the same age.

The sieving of soil from an archaeological site seems a dull job, but what amazing evidence it sometimes yields! How these bits of Welsh and Lake District rock illumine Neolithic Britain! They shatter our old ideas of the complete isolation of family or tribal groups, and reveal tracks through never-ending forests, along hillsides, across rivers and mountains from the south of England to Edinburgh. Along these tracks heavily loaded men must have tramped year after year, though probably the long journey would be in stages and men of different tribes would carry the rock through their own territory. It is difficult to imagine what they received in recompense for such arduous journeys, for there could not have been many uncommon goods to barter in those days.

At what late date some of the grooved-ware people reached Skara Brae in the Orkneys is not known, but there they adapted themselves to life on a windswept, treeless island in an ingenious, though extremely unhygienic fashion. Where their ancestors used wood they were compelled to use stone or whalebone. Their six or seven huts with tiny doorways (three and three-quarter feet by less than two feet) were connected by flagged and slab-roofed alleys, banked and even covered with sand and refuse.

Their household furniture gives us our only glimpse of the home-life of our Neolithic ancestors, but wood was replaced by flag-stones. They had two-decker stone dressers, stone beds with stone bed-posts, and little alcoves in the walls for personal treasures. In the stone-kerbed fireplace burnt a smoky peat fire, and near at hand stone boxes, water-proofed with clay, were let into the floor and filled with sea-water to keep fresh a supply of limpets. Probably the children took a limpet as children today take a toffee. The cooking-pots with slate lids and the "table" ware were very poor and rough. Even such rude peasants adorned themselves with red, yellow, and white

paint, which they stored in jars of whalebone. They wore necklaces and pendants of cows' and whales' teeth, boars' tusks, and ivory. They made bowls out of whalebones, and expended much energy in grinding curious spiked or knobbed stone balls (a little larger than a cricket ball). Similar balls have been found in Ireland and Westmorland, and are common in Aberdeenshire, but there are no other Skara Brae objects with them.

These folk seem to have forgotten the crafts of their forefathers, for there is no sign of spinning or weaving, or even of hunting or fishing, though they surely caught fish by some means to eke out their meagre seasonal diet of calves and lambs. Of their religion or burial customs there is no trace.

If long-isolated settlers such as these, living under such hard conditions, could so adapt themselves to their environment, surely Neolithic people in better circumstances had homes and furniture, household goods and implements, very similar to those of peasants in remote islands and country districts of the British Isles up to comparatively recent times. Their skill in seafaring and in travel through forest and marsh lands is worthy of respect. Some customs and superstitions that still linger faintly in the memories of old country folk are probably the last echoes of religions which sustained and comforted, but sometimes degraded, our own ancestors, the first British farmers, seamen, and traders. Their difficulties might well daunt us, yet they had to overcome them by their wits, dogged determination, and a very meagre supply of tribal lore.

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ABBREVIATIONS.—*Ant.*, "Antiquity"; *Ant. J.*, "Antiquaries' Journal"; *A.J.A.*, "American Journal of Archaeology"; *Arch.*, "Archæologia"; *I.L.N.*, "Illustrated London News"; *L.A.A.A.*, "Annals of Archaeology and Anthropology, Liverpool"; *P.P.S.*, "Proceedings of the Prehistoric Society"; *O.S.*, "Ordnance Survey"; *J. of N.E.S.*, "Journal of Near Eastern Studies."

CHAPTERS I, II, III.—First-hand accounts of excavations in the Near East are difficult to obtain, but it is worth much trouble to seek and read reports (well-illustrated) in *Iraq*, *Revue Biblique*, *L.A.A.A.*, *J. of N.E.S.*, and *Syria*, and to search the files of the *I.L.N.* for popular articles.

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For Syria and Iraq see: Sakje Geuze—*L.A.A.A.*, 1908 and 1937. *Arpachiyah*—*I.L.N.*, May and Sept. 1933, and *Iraq*, April 1935. *Hassuna*—*J. of N.E.S.*, 1945. *Khabur River area*—*Iraq*, 1936. *The Land of Two Rivers*, by Seton Lloyd, is a splendid popular account of the history of Iraq.

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Egypt: Most good Reference Libraries stock magnificently illustrated books on Prehistoric Egypt, such as *Mostagedda and the Tasian Culture*, by Brunton and Caton-Thompson; *The Desert Fayum*, by Caton-Thompson and Gardner, *Cultures of Prehistoric Egypt*, by E. J. Baumgartel; *The Place of Egypt in Prehistory*, by S. A. Huzayyin; and *Early Khartoum*, by A. J. Arkell. For Miss Caton-Thompson's views on Mrs. Baumgarten's theories see *Man*, April 1948.

CHAPTER IV.—Cyprus, Khirókita—*Iraq*, 1940; *Jour. of Hellenic Studies*, LVIII, 1938; and *Syria*, 1936. *I.L.N.*, June 27, 1940. Neolithic Italy—*P.P.S.*, 1947, and *Ant.*, Dec. 1946. *Archæology of Crete*, by Pendlebury. See *Childhood of Art*, by Spearing, for pictures of early Mediterranean objects.

CHAPTER V.—The following books are interesting and very well illustrated: *Prehistoric Thessaly*, by Wace and Thompson; *Early Civilization in Thessaly*, by Hanson; *Prehistoric Macedonia*, by Heurtley. For the Morava-Vardar culture see articles by Fewkes in the *Bull. of the American School of Prehistoric Research*, 1933, 1934, 1936 and *I.L.N.*, Oct. and Nov. 1930.

CHAPTERS VI and VII.—*The Danube in Prehistory*, by V. Gordon Childe, is an inexhaustible source of information, but was published in 1929. *Germania* gives many well-illustrated reports of Mid-European excavations.

CHAPTER X.—Childe's summaries in *Man*, Nov.-Dec. 1942, Jan.-Feb. 1943 and March-April 1944, give the latest news of Russian cultures.

CHAPTER XI.—*Prehistoric Malta*, by T. Zammit, is a delightful and popular book. Articles appear in *Ant. J.*, 1924, and *Ant.*, March 1928, 1930, and 1942.

CHAPTER XII.—There is little easily available material on this chapter beyond papers by J. Hawkes in *Arch. Jour.*, 1938, and *Ant.*, March 1934. Swiss Lake cultures are described by Vouga in *Ant.*, Dec. 1928. See *P.P.S.*, 1949, for an important article on "The Birch as a Source of Raw Material During the Stone Age." Birch bark was used by the Pile-dwellers for tapers, boxes, floor-coverings, for insulating ovens, covering comb-handles, and for making cut-out patterns to stick on pottery. Flint tools were fixed into handles with birch-pitch.

CHAPTER XIII.—Information on Iberian prehistory is also difficult to obtain. Excellent, but not up-to-date, books are *La Civilisation énéolithique dans la Péninsule ibérique*, by Aberg; *Les Peintures rupestres schématiques de la Péninsule ibérique*, by Breuil; *Les Premiers Âges du métal*, by Siret; *Etnologia*, by Bosch Gimpera; *Manuel I*, by Déchelette. Articles appear in the *American Anthropologist*, XXXIII; *Ant. J.*, XIV, 1934; *Arch.*, LXX.

CHAPTER XIV. There are many articles on French megaliths in *L'Anthropologie*. The most important articles in English are "Cultures of Atlantic Europe," by Ford, in the *American Anthropologist*, XXXIII, and his articles in *Ant. J.*, Dec. 1927, and *Man*, 1929. Others are found in *Ant.*, Dec. 1937; *P.P.S.*, 1935, 1939, 1941; *Ant. J.*, 1933. *Guernsey*, by T. D. Kendrick, and *Jersey*, by J. Hawkes, deal with the Channel Islands.

CHAPTERS XV-XVIII and XX.—It is possible to mention only a few of many books and articles on British Archaeology. *Prehistoric England* (4th edition), by J. D. Clarke, is fairly simple and has excellent photographs. Professor Piggott's *British Prehistory*, in the Home University Library, is up to date (1950). *Sussex*, by Curwen, is a model of its kind and deals with British as well as local archaeology. *The Personality of Britain*, by Cyril Fox, discusses the geographical approach to the subject. *Prehistoric Communities of the British Isles*, *The Prehistory of Scotland*, and *Skara Brae*, by V. Gordon Childe, are easy to read considering the amount of information they contain. For sheer delight, as well as accurate information, read J. and C. Hawkes' *Prehistoric Britain* (Penguin edition, 1s. 6d.). The large edition (12s. 6d.) has a gazetteer of British prehistoric sites. *Long Barrows of the Cotswolds*, and *Wessex from the Air*, by O. G. S. Crawford, are also useful. *Excavations on Prehistoric Sites at Dorchester* (Oxford, Vol. I), by Atkinson, Piggott, and Sandars, deals with transitional peoples. See *P.P.S.*, 1949, for articles on a stone-axe factory at Great Langdale, Westmorland: Neolithic house-types in temperate Europe: Distribution and date of the Passage-Graves of the British Isles.

The *O.S. Archaeological Maps* are invaluable, but unfortunately are out of print. Professors S. Piggott and C. F. C. Hawkes are preparing books on British prehistory.

Welsh prehistory can be studied in the National Museum, Cardiff, or in its handbook, *The Prehistory of Wales*. An article by W. F. Grimes in the *P.P.S.*, Jan.-July 1936, deals with Megalithic Wales, and Bryn Celli Ddu is described in *Arch.*, LXXX, 179. *A Hundred Years of Welsh Archaeology* is the Centenary Volume of the Cambrian Archaeological Association, 1949. An article on "Early Man and Soils of Anglesey," *Ant.*, Dec. 1945, is important.

Scottish archaeology is covered by *The Proceedings of the Society of Antiquaries of Scotland*.

The excellent *Ulster Journal of Archaeology*, *The Proceedings of the Royal Irish Academy*, and *The Journal of the Royal Society of Antiquaries of Ireland* deal with Irish prehistory. In *P.P.S.*, 1934, Mahr gives a review of Irish prehistory, and Breuil discusses prehistoric art.

For detailed information about prehistoric monuments refer to the inventories of the Commission on Ancient Monuments, the County Histories, or Methuen's County archaeological books.

Antiquity has published several articles on modern survivals of ancient ways of life: Dec. 1933, Stradballys in Ireland; Dec. 1936, Welsh houses; Sept. 1938, Dec. 1938, Hebridean survivals; June 1939, Donegal survivals; Dec. 1942, Neolithic life in the Hebrides; Sept. 1945, Neolithic type of farmsteads in India. See also *Man*, Dec. 1944, "Blackhouses and Beehive Huts in the Hebrides"; *Folklore*, June 1948; *Archaeology and Folklore*, by H. J. Fleure. Methods of erecting standing stones were discussed in *Ant.*, Sept. and Dec. 1928, and June 1930. In the *Ant. Jour.*, 1946, Mrs. Davis writes on Megalithic mariners' sea-routes, tomb distribution, and geography. In the same journal (1936) is a report of the interesting Manx tomb of Cashtal-yn-Ard by Fleure and Neely.

CHAPTER XIX.—*Scandinavian Archaeology*, by G. H. Shetelig, H. Falk, and E. V. Gordon, is a very readable and well-illustrated account of Northern Cultures. Nordmann gives a more scientific account in "Megalithic Cultures of Northern Europe" and Forde in "Cultures of Atlantic Europe" (*Am. Anthro.*, XXXIII). Several interesting articles have appeared in *Ant.*: June 1934 and Dec. 1935, on Neolithic Houses; June 1938, on "Early Agriculture"; Sept. 1940, on Trelleborg; June 1941, on "Impressions of Grain on Pottery"; Dec. 1943, on "Harvesting Implements"; March 1946, on "Furrows on Prehistoric Fields"; and Sept. 1949 on "The Origin of Neolithic Culture in Northern Europe." *P.P.S.*, 1937, reports a flint dagger found in its leather sheath.

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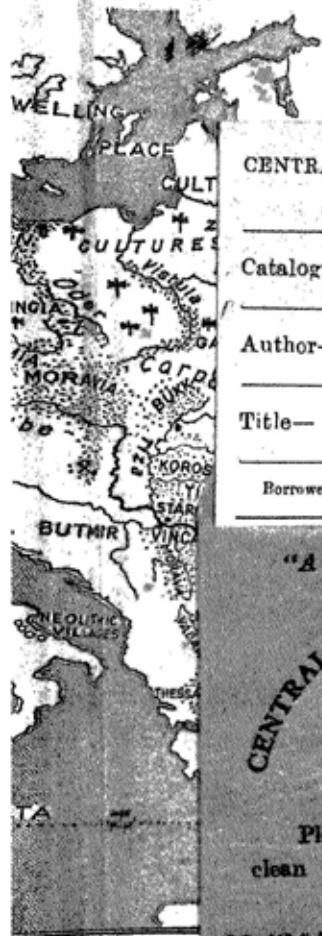
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